

VILLANOVA UNIVERSITY CATALOG

UNDERGRADUATE STUDIES 2021 – 2022

EXPANDED VERSION
INCLUDES COURSE DESCRIPTIONS

While this catalog was prepared on the basis of the best information available at the time of publication, all information, including statements of fees, course offerings, admissions, and graduation requirements, is subject to change without notice or obligation. Please consult the electronic catalog at <http://www1.villanova.edu/villanova/provost/catalog.html> for more recent information as well as the web sites listed for the particular policies, programs and services found in this catalog.

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VILLANOVA UNIVERSITY
September 2021

VILLANOVA An Equal Opportunity Educational Institution

General Information

The University campus is situated in Villanova, Pennsylvania, on Lancaster Pike (U.S. Route 30) six miles west of City Line Avenue in Philadelphia, Pennsylvania. The post office address is 800 Lancaster Avenue, Villanova, Pennsylvania 19085-1699. University offices are open Monday through Friday from 9 a.m. to 5 p.m. The telephone number is 610-519-4500. The Web address is www.villanova.edu.

Prospective students may obtain additional information by contacting the Director of Admissions, Villanova University, 800 Lancaster Avenue, Villanova, Pennsylvania 19085-1699, tel. 610-519-4000, email: gotovu@villanova.edu

Villanova University is an affirmative action institution, and it is the continuing policy of Villanova not to discriminate against any person on the basis of race, color, sex, sexual orientation and gender identity, religion, national origin, age, veteran status, non-job-related disability or any other basis prohibited by law.

NOTE: In order that programs offered by Villanova University reflect current advances and additions to knowledge and upgraded professional requirements, Villanova University reserves the right to change programs and requirements without prior notice. Students generally are bound to the requirements in effect and published on the world wide web for the year in which their class begins its first year of study. Special requirements may be in effect for students who have left the University and are being readmitted.

Students are advised to check with the web catalog or with their college offices regarding changes that may affect them. Additional academic information may be obtained from the various college offices and the web sites listed for the particular policies, programs and services found in this catalog.

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Academic Calendar: 2021-2022

Fall Semester (2021)

Aug. 19-22 (Th-Su)	New Student Orientation and Registration
Aug. 23 (M)	Classes Begin
Aug. 27 (F)	Last day for requesting Satisfactory/Unsatisfactory
Aug. 29 (Su)	Last Day for dropping and/or adding classes
Sept. 6 (M)	Labor Day - No Classes
Oct. 8 (F)	Mid-term
Oct. 11 (M)	Semester Recess
Oct. 18 (M)	Classes Resume
Oct. 20 (W)	Grades Due (Noon)
Oct. 22 (F)	Registration Advising Begins Registration Begins for Spring 2022
Nov. 10 (W)	Last Day for Authorized Withdrawal without Academic Penalty(WX)
Nov. 23 (Tu)	Thanksgiving Recess begins after last class
Nov. 29 (M)	Classes Resume
Dec. 9 (Th)	Final Day of Classes
Dec. 10 (F)	Reading Day
Dec.11-17 (Sat-F)	Final Examinations (No exams on Sunday, Dec. 12)
Dec. 20 (M)	Final Grades Due (12 Noon)

Tuesday, December 7 will be deemed a Friday class day and will follow a Friday schedule (UG Day only)

Spring Semester (2022)

Jan. 10 (M)	Classes begin
Jan. 14 (F)	Last day for requesting Satisfactory/Unsatisfactory
Jan. 16 (Su)	Last day for dropping and/or adding classes
Jan. 17 (M)	Martin Luther King Day (No classes)
Feb. 28 (M)	Semester Recess
Mar. 7 (M)	Classes Recess
Mar. 7 (M)	Mid-term
Mar. 9 (W)	Mid-term grades due at 12:00pm (Noon)
Mar. 11 (F)	Registration Advising Begins Registration begins for Fall 2022
Mar. 30 (W)	Last day for Authorized Withdrawal without academic penalty
Apr. 13 (W)	Easter recess begins after last class
Apr. 19 (Tu)	Classes resume
Apr. 28 (Th)	Final day of classes
Apr. 29 (F)	Reading Day
Apr. 30-May 6 (Sa-F)	Final Examinations (No exams on Sunday, May 2)
May 9 (M)	Final grades due – Spring 2022 semester at 12:00pm (Noon)
May 13-14 (F-Sa)	Commencement Weekend

Tuesday, April 26 will be deemed a Friday class day and will follow a Friday schedule (UG Day only)

Wednesday, April 27 will be deemed a Monday class day and will follow a Monday schedule (UG Day only).

Academic Calendar 2022-2023

Fall Semester (2022)

Aug. 20-23 (Sat-Tu)	New Student Orientation
Aug. 24 (W)	Classes Begin
Aug. 30 (Tu)	Last Day for requesting Satisfactory/Unsatisfactory
Aug. 30 (Tu)	Last Day for dropping and/or adding classes
Sept. 5 (M)	Labor Day – No Classes
Oct. 14 (F)	Mid-term
Oct. 17 (M)	Semester Recess
Oct. 24 (M)	Classes Resume
Oct. 26 (W)	Grades Due (Noon)
Oct. 28 (F)	Registration Advising Begins Registration Begins for Spring 2023
Nov. 9 (W)	Last Day for Authorized Withdrawal without Academic Penalty. (WX)
Nov. 22 (Tu)	Thanksgiving Recess begins after last class.
Nov. 28 (M)	Classes Resume
Dec.12 (M)	Final Day of Classes
Dec. 13 (Tu)	Reading Day
Dec. 14-20 (W-Tu)	Final Examinations (No exams on Sun., Dec. 18)
Jan. 3 (Tu)	Final Grades Due (12 Noon)

Spring Semester (2023)

Jan. 16 (M)	Martin Luther King Day (No Classes)
Jan. 17 (Tu)	Classes Begin
Jan. 23 (M)	Last day for requesting Satisfactory/Unsatisfactory
Jan. 23 (M)	Last day for dropping and/or adding
Mar. 3 (F)	Mid-term
Mar. 6 (M)	Semester recess
Mar. 13 (M)	Classes Resume
Mar. 15 (W)	Mid-term grades due at 12:00pm (Noon)
Mar. 17 (F)	Registration begins for Fall 2023 Registration Begins for Fall 2023 Semester
Apr. 5 (W)	Last day for Authorized Withdrawal without academic penalty
Apr. 5 (W)	Easter recess begins after last class
Apr. 11 (Tu)	Classes resume
May 4 (Th)	Final day of classes
May 5 (F)	Reading Day
Ma 6-12 (Sa-F)	Final Examinations (No exams on Sun., May 7)
May 15 (M)	Final grades due – Spring 2023 semester at 12:00pm (Noon)
May 19-20 (F-Sa)	Commencement Weekend

Tuesday, May 2 will be deemed a Friday class day and will follow a Friday schedule (UG Day only).

Wednesday, May 3 will be deemed a Monday class day and will follow a Monday Schedule (UG Day only).

Villanova University

Background

For a century and a half, Villanova has been directed by the Order of St. Augustine, known as the Augustinians (<http://heritage.villanova.edu/>), one of the oldest religious teaching orders of the Catholic Church. The first American foundation of the order within the present limits of the United States was established in 1796 at old St. Augustine's Church in Philadelphia. Villanova University traces its lineage from this foundation and from St. Augustine's Academy, which was opened there in 1811.

In January 1842, the Augustinians at old St. Augustine's took possession of Belle Air, the country estate of the Revolutionary officer and merchant John Rudolph. In accordance with the old Catholic custom, the new foundation was placed under the patronage of a saintly hero of the past. For their patron the Augustinians chose St. Thomas of Villanova, a 16th century Spanish Bishop who was a distinguished Augustinian writer and educator. The school soon became known as Villanova and gave its name to the surrounding countryside.

Classes were opened in the old mansion house at Belle Air during the fall of 1843. On March 10, 1848, the Governor of Pennsylvania, Francis R. Shunk, signed the Act of the Legislature incorporating The Augustinian College of Villanova in the State of Pennsylvania and conferring on Villanova College the right to grant degrees in the Arts and Sciences.

The Liberal Arts College took its first step toward university status in 1905 with the establishment of what is now called the College of Engineering. The Science unit, inaugurated in 1915, is now an integral part of the present College of Liberal Arts and Sciences. In 1918, what was known as the Part-Time Studies Division of the College of Professional Studies came into being. The College of Commerce and Finance was founded in 1922 and became the Villanova School of Business in 2006. The College of Nursing and the School of Law were founded in 1953. The College of Professional Studies was founded in 2014.

Villanova's development over the years into a complex institution of higher education received official sanction when, on November 10, 1953, pursuant to an act of the Legislature of the Commonwealth of Pennsylvania, its charter was amended to permit its being designated Villanova University.

Mission Statement. Villanova University is a Catholic Augustinian community of higher education, committed to excellence and distinction in the discovery, dissemination and application of knowledge. Inspired by the life and teaching of Jesus Christ, the University is grounded in the wisdom of the Catholic intellectual tradition and advances a deeper understanding of the relationship between faith and reason. Villanova emphasizes and celebrates the liberal arts and sciences as foundational to all academic programs. The University community welcomes and respects members of all faiths who seek to nurture a concern for the common good and who share an enthusiasm for the challenge of responsible and productive citizenship in order to build a just and peaceful world.

ENDURING COMMITMENTS. In pursuit of this mission, we commit ourselves to academic excellence, to our values and traditions, and to our students, alumni and the global community.

To foster academic excellence, we as a University:

- Create a diverse community of scholars, united and dedicated to the highest academic standards.
- Emphasize the liberal arts and sciences as our foundation and foster in our students, active engagement, critical thinking, life-long learning and moral reflection.
- Concern ourselves with developing and nurturing the whole person, allowing students, faculty and staff to grow intellectually, emotionally, spiritually, culturally, socially and physically in an environment that supports individual differences and insists that mutual love and respect should animate every aspect of university life.
- Encourage interdisciplinary research, teaching and scholarship.
- Affirm the intrinsic good of learning, contemplation and the search for truth in undergraduate and graduate education.
- Support a curriculum that encourages both a global perspective and an informed respect for the differences among peoples and cultures.

To honor our values and tradition, we as a Catholic University:

- Believe that the dialogue between faith and reason drives the pursuit of knowledge and wisdom, and fosters St. Augustine's vision of learning as a community ethos governed by love;
- Seek to understand, enrich and teach the Catholic intellectual tradition through our curricula, scholarship and activities in ways that engage diverse religious, intellectual and cultural traditions in a vigorous and respectful pursuit of truth and wisdom in every area of humanity.
- Provide opportunities for students, faculty and staff to seek guidance from Catholic intellectual and moral traditions, while always welcoming people from all faiths, cultures and traditions to contribute their gifts and talents to our mission.
- Respect and encourage the freedom proposed by St Augustine, which makes

civil discussion and inquiry possible and productive.

- Look to the Order of St. Augustine to preserve our Augustinian character, by showing appropriate preference to Augustinians in faculty and staff appointments, and by welcoming their presence and influence in our university community.

To serve our students, alumni and global community, we as an Augustinian University:

- Encourage students, faculty and staff to engage in service experiences and research, both locally and globally, so they learn from others, provide public service to the community and help create a more sustainable world.
- Commit to the common good, and apply the knowledge and skills of our students and faculty to better the human condition.
- Encourage our students and faculty to pursue virtue by integrating love and knowledge, and by committing themselves to research and education for justice, with a special concern for the poor and compassion for the suffering.
- Respect a worldview that recognizes that all creation is sacred and that fosters responsible stewardship of the environment.
- Include our alumni as an integral part of the Villanova community.
- Value highly our relationship with neighboring communities.

Academic Programs and Services

Degree Programs. Programs of undergraduate study in the various colleges lead to the following degrees:

College of Liberal Arts and Sciences (www.artsci.villanova.edu): Bachelor of Arts; Bachelor of Science; Bachelor of Arts, Honors; Bachelor of Science, Honors; Associate of Arts (only offered to students enrolled in Villanova's Graterford Program).

College of Engineering (www.engineering.villanova.edu): Bachelor of Science in Chemical Engineering, Bachelor of Science in Civil Engineering, Bachelor of Science in Computer Engineering, Bachelor of Science in Electrical Engineering, Bachelor of Science in Mechanical Engineering; Bachelor of Science in Chemical Engineering, Honors; Bachelor of Science in Civil Engineering, Honors; Bachelor of Science in Computer Engineering, Honors, Bachelor of Science in Electrical Engineering, Honors, Bachelor of Science in Mechanical Engineering, Honors.

School of Business (www.villanova.edu/business): Bachelor of Science in Accountancy, Bachelor of Business Administration, Bachelor of Business Administration, Honors.

College of Nursing (www.nursing.villanova.edu): Bachelor of Science in Nursing

College of Professional Studies (www.cps.villanova.edu): Bachelor of Interdisciplinary Studies, Bachelor of Arts, Associate of Arts. Students may also pursue selected Bachelor of Arts or Bachelor of Science degrees in the College of Liberal Arts and Sciences.

Majors will be listed on the transcript, not on the diploma. To qualify for the Bachelor's Degree, the student must have completed successfully one of the four-year courses of study as specified by the University together with other work assigned. The awarding of the degree is conditioned not upon the attainment of any fixed number of credit hours, but upon the satisfactory completion of all the studies prescribed for the degree sought. Details are available in each college's sections of this Catalog.

Normally, a student may receive only ONE degree, regardless of how many majors s/he earns. Students who have completed all the requirements for two or more degrees – e.g., B.B.A. and B.A, or B.A. and B.S.. – must choose which degree to take – unless they have completed 43 or more additional credits beyond the greater of the two program credit requirements, in which case they may receive two degrees and two diplomas. Multiple majors, regardless of college, will appear on a student's transcript. The College Dean will be responsible for the proper counting of credits and for determining whether a given student will receive more than one degree/diploma.

Accreditation and Recognition. Villanova is approved by the Pennsylvania Department of Education and is accredited by the Middle States Association of Colleges and Secondary Schools. The degree program in computer science is accredited by the Computer Science Accreditation Commission of ABET, www.abet.org. The Chemistry Program is certified by the American Chemical Society. Villanova University is recognized by the United States Navy as a training center for Reserve Officer Training (NROTC). The undergraduate programs in Chemical Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, and Mechanical Engineering are accredited by the Engineering Accreditation Commission of ABET, www.abet.org

Degree programs within the School of Business are fully accredited by the American Assembly of Collegiate Schools of Business(AACSB).

The College of Nursing is approved by the State Board of Nursing of the Commonwealth of Pennsylvania. Upon completion of the undergraduate program, graduates are eligible to take the licensing examination (NCLEX) for professional registered nurses. The undergraduate and graduate programs are both fully accredited by the Commission on Collegiate Nursing Education.

Advising. Villanova takes seriously the responsibility of academic advising. Students are urged to consult with their academic advisers on a regular basis. Each College has its own advising system. For details, see the college sections that follow in this Catalog and consult the various college offices.

Augustinians at Villanova. The Augustinian Order is a vibrant presence at Villanova University. Members of the Order serve in many areas of the University including teaching in academic departments, ministering and counseling in Campus Ministry, as well as serving in a number of administrative positions. Augustinians are also represented in the governance of the University, as President and through membership on the Board.

Villanova seeks to play an important role in allowing the voice of Augustine of Hippo (354- 430 A.D.) to continue to speak effectively to today's world. With this in mind, Villanova established The Augustinian Institute to solidify efforts already undertaken and initiate new projects that flow from this rich Augustinian legacy. This Institute serves the university as an agent and resource to support its efforts to give Augustine's thought a vibrant and integral place within Villanova's academic and community life. Beyond the university it reaches out to the wider culture through conferences, publications, fellowships, and other initiatives. The Institute is located in 451 St. Augustine Center.

The Augustinian Historical Institute promotes the research and publication of studies in the history of the Augustinian Order and in the allied fields of theology, philosophy, missiology, and biography. Located in the Augustinian Room, 301 Old Falvey, the Institute maintains an exceptional collection of books, manuscripts, reviews and micro copies pertinent to these studies.

Career Center. The Career Center provides guidance to all students and alumni of Villanova on every step of their career journeys: exploring career and graduate school options, strategically connecting to internships and jobs, changing careers, and more. The team at the Career Center partners with units across the university to deliver comprehensive professional development opportunities customized to a variety of interests each year. The Center manages Handshake, the university's career management system, which connects students and alumni to thousands of job postings and on-campus interviews, as well as hundreds of recruiting events which take place on campus. Individual career counseling is available year-round, allowing Villanovans to get specific feedback and best practices on interviewing, resume and cover letter writing, and industry-specific job search strategies. The Career Center's website provides extensive information on career development and resources for graduate school applicants. The office is located in Garey Hall on the 1st floor and our team, including trained student Career Assistants, looks forward to meeting you.

Center for Access, Success and Achievement. The Center for Access, Success and Achievement (CASA) aims to recruit, retain, and graduate underrepresented, first generation, and Pell Eligible students through holistic support in a culturally diverse and academically excellent environment. Our goal is to maintain successful retention by providing students with a sense of belonging in a nurturing environment, opportunities for self-realization and personal development, and holding them accountable for working to the best of their abilities. As a multifaceted center, CASA houses a number of resources that provide access to success. In addition, our office coordinates programming throughout the year to promote self-care, self-actualization, and self-advocacy. To accomplish these goals, we partner with local units, resources, and Villanova departments to provide coordinated care and support. The Center for Access, Success and Achievement is located in the Learning Commons, Falvey Library, 2nd Fl. Call 610-519-4075 for information.

The main programs are:

Academic Advancement Program (AAP). AAP is an admission and resource program designed especially for highly motivated students who have strong academic credentials and could benefit from additional financial and academic support. The goal of the AAP program is provide an educational opportunity to such students and to facilitate their academic and personal adjustment to college. The pre-college component offers a three-credit freshman English course, math, college writing skills, general sciences classes, and critical thinking workshops. Selection for participation is made through the Admissions Office and is based on students' high school transcript, SAT/ACT scores, their college essay and family income levels. Students residing in Pennsylvania, New Jersey, Delaware and Maryland are eligible for the AAP program. Anyone interested in this program should call Linda Coleman at 610- 519-4074.

A.C.T.I.V.E (Advising, Counseling, Tutoring, and Information to enhance the Villanova Experience). CASA offers comprehensive integrated services to all in- coming students. Our goal is to ease first and second year students' transition into the Villanova University community. In addition to academic tutoring, counseling and course advising, we can also help students select and get involved with a wide array of engaging extracurricular activities. First and second year students, at times, may feel overwhelmed and under prepared when inundated with opportunities and issues on and off campus. When faced alone, these issues may affect their personal and academic life. Adding to those concerns may sometimes include cultural differences, social, political, spiritual, and economic hardships. The Center for Access, Success and Achievement combats these concerns through the services they offer. Anyone seeking information about this program should call 610-519-4075.

St. Thomas of Villanova Scholars Program (STOVS). The STOVS program is a three-week summer program where invited incoming freshmen begin their college career. During STOVS, students have the opportunity to familiarize themselves with college level courses, connect with University faculty and administrators, and meet some of their new best friends. STOVS is a residential program and during this summer program, students take a 3-credit, Augustine and Culture Seminar (ACS) class, or a 3- credit Economics class (based on major selection and committee recommendation). Through one-on-one meetings, students will begin to identify and work towards their academic, social, and career goals. Students are invited to apply to the STOVS program in early May, after submitting their deposit to attend Villanova University. For more information about the program contact The Center for Access, Success and Achievement at 610-519- 4075.

Center for Research and Fellowships. The Center for Research and Fellowships (CRF) is a results-oriented team of professionals that supports Villanovans—at all levels and from diverse backgrounds—to enhance their career trajectories through mentoring, student research funding, and assistance in winning competitive awards. CRF provides the opportunity to engage in undergraduate research as well as comprehensive advising for students who pursue prestigious national scholarship and fellowship opportunities. The team at the Center mentors students in all aspects of professional development, and this mentoring can begin as early as a student's first year.

Applications assisted by the CRF team include the Truman, Goldwater, Udall, Fulbright, Knight-Hennessy, Marshall, and Rhodes Scholarships, the National Science Foundation Graduate Research Fellowship, the DAAD-RISE international research internships, and National Science Foundation Research Experiences for Undergraduates, among others. Established in 2001, we have connected hundreds of Villanova students and alumni to programs of research and scholarship around the world.

CRF provides financial support for student research through the Villanova Match Research Program for First-Year Undergraduates and the Villanova Undergraduate Research Fellows Program, as well as short-term research, conference, and travel grants. In recent years, over 250 Villanova undergraduates have received CRF funding for research that they have published in peer-reviewed scholarly journals and presented at national and international conferences.

The Center is also proud to manage all aspects of the Presidential Scholars Program, including the nomination, application, and selection processes as well as mentoring Presidential Scholars throughout their time at Villanova—and beyond. CRF is located in Garey Hall.

Dean's Lists. Each year the Dean of each college at Villanova honors those students who are deemed to have established an outstanding academic record as determined by the College and its Dean. To qualify for the Dean's List, a student must be a full-time student, with no non-passing or missing grades on the semester report, at least 12 credits of earned letter grades and with a semester average of 3.5. The College of Nursing has a Dean's List only in the spring semester and requires a 3.5 average in both semesters.

Education Abroad. Each year, over 800 Villanova students study overseas for a summer, a semester, or a year to add an international dimension to their academic career. Villanova offers students a wide variety of programs and locations around the world. All majors can study abroad for a semester, though planning early is important, especially for Engineering, Nursing, and Science students. The Office of Education Abroad helps students identify opportunities and facilitates the process of enrollment in overseas programs. For more information, visit our website abroad.villanova.edu, email abroad@villanova.edu or call the main office at 610-519-6412.

Honor Societies. In addition to the many honor societies appropriate to individual colleges and academic disciplines and departments, Villanova has chapters of these national honor societies:

Phi Beta Kappa

<https://www1.villanova.edu/villanova/artsci/undergrad/resources/phibetakappa.html>

The Sigma Chapter of Phi Beta Kappa was established at Villanova in 1986. Membership is an honor conferred primarily in recognition of outstanding scholarly achievement in the liberal arts and sciences.

Phi Kappa Phi

https://www1.villanova.edu/villanova/studentlife/be_engaged/fsl/chapters/pikappaphi.html

Phi Kappa Phi is an honor society whose objective is the recognition and encouragement of superior scholarship in all academic disciplines.

Alpha Sigma Lambda.

<https://www1.villanova.edu/villanova/professionalstudies/students/alpha-sigma-lambda.html>

The Mu Chapter of Alpha Sigma Lambda was established at Villanova University in 1958. The society honors dedicated part-time and evening students.

Information Technologies. The Office for University Information Technologies (UNIT) partners with the Villanova Community to deliver IT Solutions and Services. UNIT delivers innovative technology offerings for wide and varied needs ranging from academic related technology, IT computing, network services, web development and support services to the entire campus community. UNIT also provides a campus-wide network for data, voice, and

video communication for students, faculty, and staff. Wireless network connectivity and Xfinity Cable services are extended to all residence hall rooms.

Virtual and VPN technologies facilitate access to network and campus technology resources from off-campus locations.

In addition to many college and department-specific student computing labs, UNIT manages public student labs located Tolentine hall as well as computer print stations throughout campus that are open 18-24 hours a day. Computer workstations in these locations feature Virtual Desktop (vDesktop) technology and support general- purpose applications such as the Microsoft Office suite and Adobe. Additionally, multiple Apple iMac are available in Tolentine Lab areas for student use.

The Villanova TechZone is a walk-up IT support center with multiple locations in Falvey Library, Charles Widger School of Law and The Commons in Cannon Hall. The TechZone provides assistance to students and Villanova Employees with University issued laptop computers, issues with BYOD (Bring Your Own Device) equipment, and general technical support issues from 9am to 7pm M-Th and 9am to 5pm F. Technical support is complemented by Web based documentation, IT Service Catalog, and UNIT's Facebook site. In addition to the TechZone, UNIT operates the University Help Desk and provides technical support and service from 8am to 7pm M-Th and 8am to 5pm F, via phone by calling 610-519-7777.

Technical service and support is also provided by Chat (www.villanova.edu/villanova/unit.html) from 9am to 7pm M-Th and 9am to 4pm F, by email (Support@villanova.edu) and Self-Service Support (<http://www.villanova.edu/villanova/unit/helpsupport/EasyVista.html>).

The Center for Instructional Technologies (CIT) provides many resources and services to promote the use of technology in the teaching and learning environment. Included in these services are multimedia development, online teaching and learning resources, instructional design consultation, training/support for the campus Learning Management System (Blackboard), video and audio streaming studios, classroom lecture capture utilizing Mediasite, video and web conferencing, access to Internet 2, workshops offered on a variety of technologies utilized on campus, and classroom AV integration and support. All 200 classrooms are equipped with high-end AV systems that feature widescreen LCD projectors, large format projection screens, intuitive control systems, various AV connectivity options, (wireless) internet access, multimedia teaching technologies and are fully supported by our Classroom Technologies Support Hotline (610-519-5631).

The Villanova User-ID is assigned to each student to access many Villanova systems and services throughout campus such as myNova, wifi, Blackboard and email. All undergraduate students receive a Gmail email account with access to Google apps. Cloud services and storage are offered via Google Drive and Microsoft Office 365- OneDrive at office.villanova.edu.

All students have a personalized portal called myNova that provides access to their course schedules and course related materials and allows them to perform most administrative functions, such as registration or grade lookup.

The University Card Office provides the “Wildcard”, a photo identification card that is required for all Villanova students, faculty, and staff. The Wildcard allows convenient and secure access to all card related services, including personal identification, facility access and access monitoring, debit transactions processing (NovaBucks), meal plan administration, banking relationship management, student printing allowance, and web- based transaction processing. The Wildcard is universally accepted on campus and at selected off-campus locations.

Nova Alert is Villanova’s Emergency Communication system that uses text and phone messaging features that enables campus public safety and university officials to send targeted alerts to students and faculty members in a matter of seconds. Nova Alert is designed to communicate an emergency, which could jeopardize the physical safety of the members of the University community. The alert is also used to notify the Villanova community about weather issues, such as snow-related campus closures. The alert may contain instructions on where to go, what to do or not do, as well as instructions on where to find additional information. Depending on the recipient’s preference, the Nova Alert may be sent to cell phones, e-mail accounts, smart phones and PDA devices. Nova Alert sign-up allows for current students, faculty, and staff to enter multiple devices, enabling alerts to be sent to parents or other family members.

Learning Communities. Join one of our Learning Communities and get the most out of your first year of college! Villanova's Learning Communities create innovative educational environments that integrate the academic, co-curricular, and communal aspects of the first year of college in specially themed versions of the required Augustine and Culture Seminar.

Your choice will help you quickly foster strong relationships with your classmates and professor. By also living in the same residence hall as your seminar classmates and participating in a 1- credit weekly workshop, you will integrate your academic and social experiences and participate in unique opportunities with special programming, events, and trips related to your learning community’s theme. Get more information at

https://www1.villanova.edu/villanova/studentlife/be_home/learningcommunities.html

Examples of themes/interests are

Leadership (commuter sections also available)

Art and Culture

Caritas: Service Learning

Creative Writing

Environmental Leadership

Faith and Reason

Global Community

Healthy Living

Crossroads: Science and Humanities (no workshop requirement)

Learning Support Services. Learning Support Services (LSS) offers students a variety of academic support services that are designed to help all Villanova students maximize their academic success. These services include one on one weekly academic coaching sessions, study skills consultation, and accommodation support for students with disabilities. Online resources including a series of study skills workshops are available from our website at:

<https://www1.villanova.edu/villanova/provost/learningsupport/>

Additionally, LSS is committed to providing “reasonable academic accommodations” for students with learning disabilities, ADHD, students on the Autism spectrum, and students with mental health conditions and chronic health conditions that rise to the level of disability. Villanova students may request support services in accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA). Our goal is to ensure that students with disabilities have an opportunity to grow independently to their full potential at Villanova.

To receive academic accommodations, students need to register with LSS by first completing the Online Intake Form through Clockwork, our secure data management system. To access Clockwork, students select the Clockwork for Students login on the Villanova University LSS website <https://www1.villanova.edu/villanova/provost/learningsupport.html> or myNOVA. Once on the Clockwork homepage, select the Online Intake form. Students can then log in with their Villanova username and password to access and complete the form. Documentation supporting the need for accommodations can be loaded directly to Clockwork. Reasonable academic accommodations are based on the assessment of the current impact of the disability on academic performance; therefore, it is in the student’s best interest to provide current and complete documentation. Given the specific nature of the disability, “reasonable academic accommodations” will be determined on an individual basis. Once approved for accommodations, the student can go into Clockwork each term to request accommodations for specific classes.

The Office of Learning Support Services is in 212 Falvey Library. For additional information about our services, contact 610-519-5176 or email learning.support.services@villanova.edu

Library Resources and Services for Students. Falvey Memorial Library, located in the center of the campus, provides a variety of services to help all students excel at Villanova.

Collections: The library's electronic and print collections include more than one million books, tens of millions of journal articles, as well as audio-visual and other types of materials. The library's e-books and e-journals are available 24/7 and can be accessed anywhere in the world through the library's website: <http://library.villanova.edu>. If a student needs a title that the library doesn't have, library staff usually can provide a copy of an article within 24 hours of request and a book within a few days.

Copies of select course materials are available at the library. Faculty may place print copies of the required and recommended readings for classes on reserve at the library's service desk or course materials may be available electronically via Blackboard.

The library also contains the University Archives and Special Collections that support the teaching and research of the campus community and the global network of scholarship. These collections include rare and unique materials with particular strengths in the histories of Villanova, Augustinians, and Irish-Americans. Many items from these distinctive collections have been digitized and are available at <http://digital.library.villanova.edu>.

Services: Subject librarians are available to assist students through the year. Librarians can help students learn the skills and tools needed to find, evaluate, and cite information sources for research assignments. Students can call, email, text, chat online, or visit the library to work with a librarian. Students looking for an in-depth consultation are encouraged to schedule a meeting with a librarian. For more information see: <http://library.villanova.edu/research>.

Librarians have also created many self-help guides to assist students with the research assignments. Guides are available on many subjects and topics as well as for specific courses at <http://library.villanova.edu/research/subject-guides>. The Learning Commons, located on the second floor of the library, provides academic support services for students. Services include the Center for Access, Success, and Achievement (CASA), Learning Support Services Office, Math Learning Resource Center, and Villanova Writing Center.

Facilities: The library is a hot spot for student study. There are many places to work in the library ranging from silent individual study, to areas that allow quiet

conversation, to group study rooms for highly collaborative work. The most popular study area in the library is Dugan Polk Family Reading Room which students can access 24 hours-a-day. Other 24-hour study spaces are available on the first and second floors of the library.

The library also has computer workstations, high-speed printers, and scanners located on the first floor of the library. TechZone is located on the first floor and provides help with connectivity, VPrint, software, hardware and other technical problems.

Community Engagement: Falvey Memorial Library is the center for academic life outside the classroom and strives to provide a welcoming environment for students of all backgrounds and abilities. The library hosts hundreds of events for the community each academic year, ranging from scholarly lectures, to cultural events, to stress relieving activities for students. The library has several meeting rooms available for use by official student groups. For more information see: <http://library.villanova.edu/events/general>.

Mathematics Learning and Resource Center: The Mathematics Learning and Resource Center (MLRC) is a center for student learning excellence. It offers free peer tutoring in mathematics, primarily with first and second year math classes. It also provides an environment where students can work on group projects, study independently, and use its learning resources. These resources include computers capable of running the mathematical software currently being used in math courses offered at Villanova and a comprehensive collection of review materials which students may use for review or independent learning. The Center is located in 204 Falvey Library, tel. 610- 519-6572. <https://www1.villanova.edu/villanova/provost/mlrc.html>

ROTC: Villanova University, in a long-standing relationship with the United States Navy, maintains one of approximately 60 Naval Reserve Officer Training Corps units in the United States. The University also has an Army ROTC program in affiliation with Widener University and an Air Force ROTC program in affiliation with St. Joseph's University. For more details about these programs, consult Special Programs in the Liberal Arts and Sciences section of this Catalog.

The Center for Speaking and Presentation: Taking a public speaking class? Working on a formal presentation? Prepping for an interview? Looking for practice participating in a seminar? The Center for Speaking and Presentation can help you develop and refine these skills and more. <https://www1.villanova.edu/university/academic-enterprise/student-support/speaking-presentation.html>

The Learner's Studio: The Learners' Studio provides one-on-one tutoring for Computer Science, Romance Languages, Biology, Chemistry, Physics, Nursing, Engineering and more. <https://www1.villanova.edu/university/academic-enterprise/student-support/learners-studio.html>

Writing Center: Writing Center tutors offer assistance to undergraduates, graduate students, faculty, and staff who are engaged in every kind of writing. Students are welcome to come to the Writing Center at any stage of their composing process. Walk-in appointments are welcomed, but scheduled appointments are strongly encouraged. An individual session takes approximately 45 minutes in length, and clients may request a specific tutor. The Center is located in 210 Falvey Library; Phone: 610-519-4604. <https://www1.villanova.edu/villanova/provost/writingcenter.html>

Campus Programs and Services

Art Gallery: In its role as an extension of the classroom, Villanova's world-class Art Gallery serves to make the visual arts an engaging part of campus life for students, their families, staff and the community. Free on-campus exhibits by leading American and international artists, and emerging ones of promise, are publicly presented throughout the academic year.

Athletics and Recreation: Villanova student-athletes compete in 24 varsity sports, including 13 sports for women and 11 for men. The rich tradition of Wildcat Athletics has produced 20 National Championships and 103 Conference Championships. Faculty, staff and students have access to fitness centers, a swimming pool and intramural and competition in a wide variety of sports. In addition, the Athletic Department offers 30 different club sports in which students participate.

Campus Ministry - St. Rita Hall

Linda Jaczynski: Director, Center for Worship and Spirituality
John Edwards: Director, Center for Pastoral Ministry
Education
Kate Giancatarino: Director, Center for Service and Social Justice
www.campusministry.villanova.edu
610-519-4080

Villanova Campus Ministry is inspired by the Augustinian values of truth, unity and love, and models its programs after St. Thomas of Villanova, who dedicated his life to serving those on the margins of society. We welcome and encourage all students to engage in the search for meaning and purpose - through prayer and liturgy as well as education, community, and service. Embracing people of all faiths, and those who do not identify with any faith tradition, we seek to provide spaces for students, individually and in community, to explore the intersection of personal beliefs, spirituality, justice, and compassionate engagement with the world around them

Through its fulltime staff and graduate interns, Campus Ministry coordinates a diverse array of **worship and prayer opportunities** for the Villanova community. We pray together through daily and weekly Masses, a weekly Ecumenical Protestant worship service, Muslim Friday prayers, and opportunities for devotional and mindfulness practices, as well as special worship services marking major events throughout the academic year. Many students participate in worship leadership as liturgical ministers, pastoral musicians, and members of planning teams.

Students learn and grow together through weekly **“Get Real” discussion groups**, opportunities for individual **spiritual direction**, and a wide array of **retreats** that encourage reflection and understanding of personal faith. Campus Ministry partners with diverse Christian fellowship groups, Hillel, the Muslim Student Association, and the student-led Interfaith Coalition to create **ecumenical and interfaith** experiences that enable students of diverse religious traditions to know and learn from one another.

Seeking to embody the call of the Gospel, and inspired by Catholic Social Teaching, Campus Ministry provides opportunities for students, faculty and staff to act in solidarity with neighbors in need – locally, nationally and globally - through **Service and Justice Education** break trips, and **weekly community service** options. These service experiences are accompanied by opportunities to reflect upon the people and communities encountered in light of issues of social injustice, in order to deepen students’ ongoing learning.

Campus Ministers provide **pastoral care and counsel**, including helping students deal with value conflicts, grief, spiritual discernment, and many other issues connected with faith and life.

In all that we do, Campus Ministry prioritizes the development of leaders who embody the values of truth, unity and love, and the fostering of community life shaped by pursuit of the common good.

Campus Ministry is located on the first floor of St. Rita's Hall. Regular weekday office hours are 9 a.m. to 5 p.m., and appointments can be made in person or by phoning 610-519-4080. Detailed information on Campus Ministry activities can be found on the website:

<https://www1.villanova.edu/villanova/mission/campusministry.html> and in *The Blue Book: The Villanova University Student Handbook*.

Counseling Center: The University Counseling Center, located on the Main Floor of the Health Services Building, offers psychological counseling, groups, consultation, and referral. Except for emergencies, appointments are required and can be scheduled either by phone 610-519- 4050 or by visiting the Center.

Some examples of services are:

- **Personal and Psychological Counseling.** Students can discuss personal concerns in a private, confidential setting. Individual counseling sessions are available, as are counseling groups. All contacts are completely confidential and are not recorded on the student's university records. Doctoral Psychologists help students with issues such as: depression; anxiety; relationship concerns; eating disorders; trauma; self-defeating behaviors; family issues; and other problems.
- **Drug and Alcohol Counseling.** Students who are concerned about their use of alcohol or other drugs are encouraged to seek help from our psychologists.
- **Consultation regarding other individuals.** Students who are concerned about a family member, friend, or fellow student, may also consult the Counseling Center staff about how best to support that person.
- **Referrals are provided for students who prefer to obtain off-campus counseling, or whose counseling needs exceed the capacity of the Counseling Center.**

Crisis Response Services: Villanova University has devoted significant resources to providing a safe campus and assuring the safety of our community members. In addition to day-to-day coverage by our 75-member Public Safety team, we have an extensive Emergency Preparedness Plan in place that includes procedures to ensure a rapid response to an unanticipated emergency or threatening situation. Villanova takes all incidents affecting student, faculty, and staff safety as serious and time critical. We will use all available means of communications in a crisis situation, including text messaging, telephone, the Web site, and e-mail. The University will also implement on-site personal contacts by utilizing Public Safety officers and other University staff and officials. In the event of an emergency on campus or off, we provide full-service counseling services, as well as access to Campus Ministry staff trained to provide grief counseling.

International Student Services: The International Student Office assists international students in becoming familiar with the Villanova community, policies and U.S. government regulations that will govern their status here in the United States. The office sponsors a variety of social and cultural programs in conjunction with other Villanova organizations and local area universities and colleges. Each Fall semester in conjunction with the Office of University Admission the office holds an orientation session geared towards the concerns of incoming international freshmen.

Incoming international freshmen are strongly advised to plan to attend this program. Examples of topics covered during the orientation program include: the necessity to provide updated addresses and health insurance, how to maintain proper legal status during your academic career at Villanova, and regulations regarding employment. NOTE: Villanova University requires that all full-time

students have health insurance.

All new international students to Villanova are required to check in with the International Student Services Office upon arrival at Villanova. This office, with the Registrar's Office, is responsible to ensure that all international students are registered with the Department of Homeland Security each semester. The International Student Service Office is located in the Connelly Center, second floor (610-519-4095 or 610-519-8017).

Office of Disability Services: The Office of Disability Services (ODS) is responsible to oversee University compliance with the American with Disabilities Act (ADA) as it relates to academic accommodations.

The ODS is the primary office at Villanova University with specialized knowledge and experience in physical disability issues. ODS also advises faculty on the policies and procedures relevant to students with disabilities and acts as a general information and referral service on disability issues.

Students with identified disabilities have been admitted into Villanova University by the same criteria as other students and they have met the same rigorous standards for admission. The office meets with students to determine accommodations needed to succeed in academic programs. ODS works closely with Facilities Management to insure classroom and facility accessibility. Incoming students should make an appointment with the office to request accommodations by contacting either Mr. Greg Hannah (610-519-3209) or Dr. Stephen McWilliams (610-519-4095). The office is located on the second floor of the Connelly Center.

Office of Diversity, Equity and Inclusion

Student Outreach and Diversity Initiatives: Office of Diversity and Inclusion seeks to ensure that each student's educational experience at Villanova University takes place in the context of a welcoming, caring, just, and educationally purposeful community. The Center pursues this goal through the promotion and facilitation of intercultural awareness and by offering learning resources and structured learning experiences to support students and student organizations. Students are encouraged to contact the Center if they encounter any form of bias or discrimination at the University. Once reported, students will meet privately with office staff to develop strategies for remedying problems encountered with bias or discrimination. The office also offers opportunities for students to assist the office in achieving its goals by participating in student organizations to promote diversity. Students are encouraged to e-mail bias@villanova.edu, visit the Office of Intercultural Affairs, or the Office of Diversity and Inclusion in person or online (www.diversity.villanova.edu).

Intergroup Dialogue Program: The Program on Intergroup Relations (IGR) is an educational program focused on supporting greater understanding about issues of inequity and promoting greater justice. IGR accomplishes this by providing students (as well faculty and staff) with the opportunity to understand their own social identities and those of others' more deeply, and to engage responsibly in promoting equity through allyship and action. IGR is a partnership between the Communication Department and the Office of Diversity and Inclusion. One-credit Dialogue classes (COM 5300) are the hallmark of the program and allow students in the four colleges to engage in small group conversations about race, class, gender, religion, and sexual orientation. IGR classes are housed in the Communication Department and are rooted in developing the communication skills of dialogic listening, cross-cultural understanding, empathy, and facilitation. Specially trained faculty and staff members co-facilitate each small class, limited to 12 students. For more information e-mail igrinfo@villanova.edu or visit www.villanova.edu/igr

Office of Health Promotion. The mission of Health Promotion at Villanova University is to provide health resources and services grounded in evidence. Facilitate opportunities for students to build skills that empower them to make healthy and responsible lifestyle choices. Instill a sense of personal responsibility for individual health decisions and recognize the impact those decisions can have on the Villanova community.

Health Promotion fulfills its mission through its comprehensive campus-wide change efforts related to high-risk behaviors (e.g., alcohol abuse and sexual violence), first year learning community, POWER peer education and academic internship program, the Stall Street Journal and Student Health 101 publications, Web and print resources, one-on-one consultation, and the Thrive 365 initiative. To find out more about the Office of Health Promotion, please visit us on the first floor of the Health Services Building, call us at 610- 519-7407 or e-mail us at healthbytes@villanova.edu.

Music Activities: The Office of Music Activities promotes, maintains, and supervises the creative and artistic endeavors of student performing groups on the Villanova campus. These groups include: INSTRUMENTAL: The Villanova Band; Chamber Strings; Brass Ensemble; Woodwind Ensembles; Jazz Ensemble; Music and Instruments Club (MIC) – CHORAL: Villanova Singers (male); Villanova Voices (female); - A CAPPELLA: Haveners; Nothing But Treble; Minor Problem; Sirens; Spires; Supernovas; Vocal Minority; Measure Up – DANCE: Villanova Dance Team; Twirlers; Dance Company & Ensemble; Ablaze (Hip-Hop); Irish Dance Team; Nova Nassa (Indian Fusion/Bollywood); Nova Noise (Tap); Nova on Pointe (Ballet); Superlative (Hip Hop); Wazobia (African Dance) – THEATER: Student Musical Theater (VSMT); Student Theater (VST); Music Activities Stage Crew (MASC). For more information, visit the MUSIC ACTIVITIES

website (<http://music.villanova.edu>). PHONE 610-519-5050

Residential Facilities: The University maintains a variety of living facilities which are intended to serve as extensions of Villanova's learning environment.

Approximately 5400 students are housed on-campus across 18 traditional residence halls and 14 residential apartment structures. Lounge areas and laundry facilities are available in most residence halls and dining facilities are conveniently located throughout campus.

Admission to the University as a resident and payment of the admission deposit guarantees placement in residential facilities for consecutive freshman, sophomore, and junior years. Beginning Fall 2020, on-campus residency will be available to limited number of Seniors via a housing lottery. Transfer students are not guaranteed on-campus residency. More information on residential facilities may be obtained by contacting Residence Life, Stanford Hall (610-519-4154) or by visiting our website www.reslife.villanova.edu.

Student Health Service: The Villanova University Student Health Center (610-519-4070), is staffed by registered nurses 24 hours daily. The Student Health Center is open with limited hours during semester breaks and over the summer. Physicians and nurse practitioners are available weekdays by appointment. Gynecologic services are provided by the nurse practitioners by appointment. Registered nurses provide 24-hour care to students who require inpatient treatment and observation, as well as to students who require walk-in care. Other medical services include diagnostic laboratory testing, administration of allergy injections and immunizations. In the event that a student requires emergency care, transportation is provided to a local hospital. Though students are not billed for physician or nurse practitioner visits, they are financially responsible for some medication and all laboratory fees, as well as consultation with specialists. For information about health insurance requirements for students please see our website: <https://www1.villanova.edu/university/student-life/health-services/health-center.html>. The Health Center is located in the Health Services Building, Third Floor.

Student Involvement: Dedicated to the Augustinian mission of the University, the Office of Student Involvement seeks to foster the growth of the total person, one who builds community, values differences, leads ethically, and serves others. The office also provides a variety of services, programs, and activities which enhance campus life. The Office of Student Involvement enriches the student collegiate experience and serves the campus community through the active involvement of students, faculty, and staff in quality programs and organizations. Life at VU is filled with many opportunities for you to become an integral part of the Villanova community, as well as enriching your time at the university. There are so many options to choose from that will add to your experience on campus. Our office oversees the administration of over 200 student organizations at Villanova. Its aim is to provide a co-curricular program emphasizing leadership

skills and co-curricular learning. The interest areas represented at Villanova include: governance, programming, student media, politics, academics, cultural activities, honor societies and special interest groups. A complete listing of organizations and information on how to join can be found in the Office of Student Involvement, 102 Dougherty Hall (610- 519-4211).

Student Organizations: Getting involved with a student organization can enhance the college experience. Organizations exist for a variety of purposes including: Academic and Professional, Athletics, Cultural, Fraternity/Sorority Life, Media, Music, Dance, Student Theater, Peace & Justice, and Political. Students also can start a club if an existing one does not meet their interests. For more information visit <https://www1.villanova.edu/university/student-life/student-involvement.html> for a list of the many options on how to get connected to student organizations on campus.

Transcripts: Students may obtain transcripts of their records by ordering them online. Current students log in to myNOVA. In the search box, enter Order a Transcript. Select Order a Transcript *Current Undergraduate, Grad and Non-Credit*. Select Main Campus Degree Program and complete the order online. Student transcripts may be ordered for pick up, mailing, electronically or expedited delivery.

Students and Alumni without a myNOVA account order transcripts on-line from the Registrar's Website www.registrar.villanova.edu, Select Transcript Requests, *Undergraduate or Graduate – Office of the Registrar*, Select How to Request a Transcript and then select the TranscriptsPlus link under Alumni and Former Students to access the Main Campus Degree Program ordering form.

Telephone and email requests cannot be accepted. Official transcripts bear the seal of the University and the signature of the Registrar. Those given, mailed or electronic transcripts, delivered directly to the student are stamped with a statement which points out this fact.

Transcripts will not be released for persons whose financial accounts are not clear in the Bursar's Office.

Electronic Transcripts are available to students who attended since September 1984.

The Cost of a Transcript: PDF transcripts (payable by credit/debit card) = \$5.55 per transcript; online orders for mail delivery (payable by credit/debit card) = \$7.85 per transcript; online orders for pick-up or campus mail (payable by credit/debit card) = \$5.55; walk-in request (payable by check or cash) = \$10.00 per transcript

University Shop: The Villanova University Shop is the on-campus provider of merchandise and course-related items for Villanova University. The University Shop provides textbooks, a full selection of school supplies, calculators, and study aids. Our authentic assortment of Villanova fan gear includes t-shirts, sweatshirts, shorts, pants, hats and accessories for men, women, and children. We also carry a full assortment of drinkware, home accessories and gift items as well as dorm essentials. Our technology department features Apple products as well as phone cases, chargers, cables, printers, speakers, and more. Order online at www.villanovabookstore.com and take advantage of our free in-store pickup option, which is a huge time saver when classes begin.

Veterans Benefits: The School Certifying Officials, located in the Registrar's Office (Room 205, Kennedy Hall) serve as a liaison between the University and the Veterans Administration. Veterans, Military Students and dependents, who will be registering for the first time must contact the SCO to file their application with the Veterans Administration. Application for VA Benefits is available online through the Department of Veteran Affairs online application (<https://www.va.gov/>). After the student has registered for the appropriate courses, the enrollment certification will be transmitted to the Veterans Administration to secure payment of benefits to the veteran. Veterans who transfer from another institution must complete the form "Request for Change of Program or Place of Training," available online through the Department of Veterans Affairs website: <https://www1.villanova.edu/villanova/enroll/veterans-military.html>. The veteran must submit the signature page of the completed application together with the course information to SCO. The enrollment certification will then be transmitted to the Veterans Administration to secure payment of benefits to the veteran. It is the Veteran Student's responsibility to notify the SCO each semester after they have registered that they plan to continue to use their VA benefits, so that their credits may be certified with the VA in a timely manner.

Please contact the School Certifying Official, Todd Robinson at 610-519-4034 for more information or for any questions that you may have.

More information can be found at

<https://www1.villanova.edu/villanova/enroll/veterans-military.html>.

Veteran and Military Students

Military Tuition Benefit Verification: GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). For more information about VA educational benefits, please visit the official Veteran Affairs website at www.benefits.va.gov/gibill. The VA determines student eligibility to receive educational benefits. Students should apply for their VA educational benefit electronically by utilizing the Vets.gov (<https://www.va.gov/>) or eBenefits (<https://www.ebenefits.va.gov/ebenefits/homepage>) websites. Students will fall

into one of two categories: “Initiating VA benefits for the First Time” or “Resuming VA Benefits”.

Certification depends upon a student’s VA determined eligibility, enrollment status and program of approved study. To verify that a non-college degree (NCD) is approved for VA benefits, students can visit WEAMS

<https://inquiry.vba.va.gov/weamspub/buildSearchCountryCriteria.do>. This website has a search filter from which students can look up Villanova University to see a list of approved Non-College Degree (NCD) Programs.

At Villanova, Veteran certifications are processed within the Office of the Registrar by a School Certifying Official (SCO). SCO contact information is provided at

<http://www1.villanova.edu/villanova/enroll/registrar/veterans.html>. Students should notify their CPS Program Coordinator or online Enrollment Representative of any enrollment changes.

If a student would like to check on the status of their application, remaining entitlement, or any other general questions, they should contact the Department of Veteran Affairs educational hotline: 1-888-GI-BILL-1 (1-888-4424551) or submit a question electronically through Ask a Question. Villanova personnel cannot provide advisement or counseling related to Veteran benefits.

Military members who are eligible for Military Tuition Assistance (TA) can use TA for approved NCD courses. TA can lessen a student’s financial concerns considerably since it now pays up to 100 percent of tuition expenses for semester.

In accordance with Title 38 United States Code Section 3679(e), Villanova University will not impose any penalty, including the assessment of late fees, the denial of access to classes, libraries, or other institutional facilities, or the requirement that a Covered Individual borrow additional funds, on any Covered Individual because of the Covered Individual’s inability to meet his or her financial obligations to Villanova University due to the delayed disbursement of funding from the VA under Chapter 31 or Chapter 33.

Covered Individuals should provide to the School Certifying Official (SCO) (email: veterans@villanova.edu; phone: 610.519.4034), no later than the first day of a course of education: a certification of eligibility for entitlement to education assistance, along with the Enrollment Verification Form. A certificate of eligibility can also include a statement of benefits obtained from the VA website www.benefits.va.gov/gibill, e-benefits <https://www.ebenefits.va.gov/ebenefits/homepage> or a VAF 28-1905 form for Chapter 31 authorization purposes.

This policy applies during the period beginning when a certification of eligibility

is provided to the SCO (no later than the first day of a course of education) and ending on the earlier of one of the below dates:

The date on which payment from the VA is made to Villanova University.
90 days after the date Villanova University certified tuition and fees following the receipt of the certificate of eligibility.

Admissions. General Policy on Undergraduate Admission. Villanova seeks to enroll students who excel academically and possess wide interests and positive qualities of character. In selecting members of the first-year class from the large number of qualified candidates who meet the minimum quantitative and qualitative requirements, the University undertakes to admit those who appear best prepared to benefit from the programs of study offered.

The criteria used to assess academic potential are: the scholastic record as reflected by the rigor of courses chosen in high school and the quality of performance; rank in class (where rank is reported); scores earned the SAT and/or the ACT; participation in extracurricular and community service activities; secondary school counselor and teacher recommendation; and essays.

Students are holistically selected on the basis of individual merit. The University does not discriminate against applicants seeking admission because of their race, color, national or ethnic origin, religion, sex, sexual orientation, gender identity, age, disability, veteran status or family financial status.

Required and Elective Units for Admission. Although individual consideration is given to each applicant, it is expected that all applicants, except in most unusual circumstances, will minimally satisfy the unit requirements listed below the college to which they make application. As used here, a unit represents a year's work in any subject. Each college requires 16 units.

College of Liberal Arts and Sciences

For Liberal Arts Curriculum:

Biology	1		
English	4	Mathematics	3
Foreign Language	2	Science	2
History or Social Science	2	Electives	3

For Applied and Life Science Curricula:

English	4	Foreign Language	2
Chemistry	1	Physics (recommended)	1
Mathematics	4	Electives	4

Villanova School of Business

English	4	Science	1
History	2	Electives	5
Mathematics (Calculus preferred)	4		

College of Engineering

English	4	Physics (required)	1
Chemistry	1	Electives	6
Mathematics	4		

College of Nursing

English	4	Mathematics	3
History	2	Electives	2
Biology	1	Other Science	1
Chemistry	1	Foreign Language	2

Elective units acceptable in all colleges

Latin	2	Social Studies	2
Foreign Language	2	Mathematics	2
History	2	Laboratory Science	2
Chemistry	1		
Biology	1		
Physics	1		

Health Affiliation Program. Villanova University has accelerated Health Science Affiliation programs with a number of institutions including the University of Pennsylvania School of Dental Medicine, and the Pennsylvania College of Optometry at Salus University. Completed applications to these programs must be received by the Office of Undergraduate Admission no later than November 1. The SAT and/or ACT must be taken no later than October of the senior year.

Early Action. Early Action admission is awarded to those exceptional students who have outstanding high school records, rigorous curricula, and correspondingly high SAT or ACT scores as judged by the Committee on Admission. Applicants will be evaluated on the basis of their three-year record and scores on the SATs and/or ACTs taken no later than October of the senior year.

For Early Action, the completed application must be received by the Office of University Admission no later than November 1. Every effort will be made to notify all Early Action applicants by January 15. These applicants need not apply only to Villanova. Deferred applicants will also be notified and will be reconsidered in the Regular Decision applicant pool; candidates may also be denied admission at this time. The Committee on Admission reserves the right to

admit, defer, or deny any candidate for Early Action.

Early Decision. For students who have decided that Villanova is their first-choice after a thorough and thoughtful college search, we offer a binding Early Decision (ED) plan. With a deadline of November 1, all ED applicants will be notified of their decision by December 15. An Early Decision Form must also be submitted by November 1 with all required signatures. The Early Decision Form is available on the <https://www.commonapp.org/> website.

All standardized test results (SAT and/or ACT) must be submitted directly to Villanova and taken no later than October of the senior year for ED consideration. We will also require a senior progress report with any grades that are posted by November 1.

If you are applying for financial assistance, you must have all required documents including the FAFSA and CSS Profile submitted by November 1.

For those admitted through Early Decision, the non-refundable deposit of \$700 will be due by January 7, and all applications to other colleges and universities must be withdrawn.

For children of Villanova graduates, legacy affiliation will be given the most consideration through the Early Decision option.

Regular Decision. Applicants for Regular Decision may submit their credentials any time after August 1 prior to the start of the senior year. The completed application must be received by the Office of Undergraduate Admission no later than January 15. Applicants for Regular Decision will be evaluated on the basis of their three-year high school record (to include senior mid-year grades), rigor of curricula, and scores on the SAT and/or ACT taken no later than December of their senior year. Every effort will be made to notify all applicants by April 1 of the following appropriate decision: admittance, waiting list, denial, scholarship award, loan assistance and/or grant-in-aid. To secure a place in the class, admitted students must submit a non-refundable registration deposit of \$700 no later than May 1.

Students who are admitted as resident students and pay the \$700 enrollment deposit by May 1 are guaranteed three consecutive years (first year, sophomore and junior) of on-campus housing. Students accepting the University's offer of admission are advised to submit their registration deposits on-line or by check, credit card, or money order payable to "Villanova University" as soon as possible. The deposit is non-refundable and is applied toward the student's first semester account.

Application Procedure. To ensure proper processing of applications for admission, all candidates should follow the procedure outlined below: Complete the on-line Common Application with the Villanova Member Section by the appropriate deadline at www.commonapp.org. (This includes the submission of the Common Application and Villanova essay along with the \$80 application fee. Villanova participates in various fee waiver programs for eligible students.) Notify their secondary school counselor or other educational professionals to submit Secondary School Counselor section of the Common Application and official high school transcript to the Office of Undergraduate Admission. The completed admission applications must be received by Villanova no later than November 1 for Early Action, Early Decision, Honors Program Consideration and Health Affiliation Programs; December 1 for Presidential Scholarship (including nomination) consideration and Villanova Scholarship consideration; and January 15 for Regular Decision consideration.

Villanova offers the applicant the option to self-report your SAT and/or ACT scores in the testing section of the Common Application. Should you choose, you may also have your official score sent to Villanova, but this is not necessary for your application to be reviewed. If you are admitted and choose to enroll, we will require that the official scores be sent directly from the College Board and/or ACT. Any misrepresentation of these scores will result in the denial or recession of admission.

Submit one teacher recommendation on-line through the Common Application. (A paper copy will be reviewed, but may not become part of the applicant's file.)

Transfer Students. Candidates for admission who have attended other colleges and universities should submit applications for transfer to the Office of Undergraduate Admission of Villanova University no later than June 1 for the fall and November 1 for the spring semester (unless otherwise stipulated).

The transfer applicant must submit complete seal-bearing transcripts from all the college/university and secondary schools attended, a list of courses in progress, a catalog describing courses completed at the college-level institution, evidence of honorable withdrawal (Common Application Transfer College Report), essay and any other information the Admission Committee may require. Transfer students are required to choose a major at the time they apply. Admission criteria vary slightly contingent upon the college or academic program to which a candidate applies. A cumulative grade point average of 3.00/4.00 is recommended for students interested in transferring to Villanova. Admitted transfer students into the College of Liberal Arts and Sciences are not eligible to transfer internally to one of the other Villanova academic colleges. If you intend to earn a degree from the Villanova School of Business, the M Louise Fitzpatrick College of Nursing, or College of Engineering, you must apply directly to that college

Transfer credit towards undergraduate degrees will, in general, be granted for appropriate academic work completed with a grade "C" (2.00) or better at an accredited institution. Credit may be granted for courses without direct Villanova equivalents when such courses are of clear academic merit. Quality-grade points for work taken elsewhere are not included in the calculation of the student's cumulative average used to determine advancement at Villanova and eligibility for graduation. The final thirty credits (senior year) of a degree program and at least half of all major courses must be taken at Villanova.

Candidates for admission from junior colleges, community colleges or institutes are judged by the same regulations pertaining to applicants from four-year institutions. Credits will be granted, as above, for appropriate courses completed in a two-year program, provided that the institution is regionally accredited or a candidate for such accreditation.

Transfer students from two-year programs should note that graduation after two years of study at Villanova cannot be guaranteed because of the complexities of scheduling and the fulfillment of the requirements of Villanova's program.

Applications for transfer of credit from non-accredited institutions are considered on an individual basis. Credit is granted for those courses that are of clear academic merit and in which the transfer applicant has earned grades. In all cases, the University reserves the right to require a written examination in the course or courses in question before transfer credit will be granted.

International Students. Villanova University admits to its undergraduate program citizens from other countries who meet the appropriate criteria. International students are admitted to begin their studies in the fall semester only. The final date for receipt of the application for undergraduate students is January 15.

To be considered for admission, international students must submit the same admission application and supporting academic credentials, and all non-native English speakers must take an English language proficiency test such as the TOEFL or IELTS. Official results must be sent directly to the University. For admission consideration, candidates must attain a minimum score of 90 on the iBT (internet based), or 577 on the paper based TOEFL; or a band score of 6.5 on the IELTS. This requirement may be waived for students who have completed at least three years of secondary education at an American or International School where English is the primary language of instruction or for students who have achieved a 620 on the Evidence-based Reading and Writing section of the SAT.

All undergraduate international students should note that they must pay a non-refundable tuition deposit of \$700 by May 1 and submit a Certification of Finances form and supporting bank letter prior to the issuance of the form I-20. International students are eligible to compete for some merit-based and athletic

scholarships. Need-based financial aid is available to first-time freshman international students from University sources on a limited basis.

Villanova recognizes advanced standing from the College Board's Advanced Placement program (AP) and from the International Baccalaureate Programme (IB). Students who have taken these courses should report to their College Dean's office to verify Villanova's receipt of the scores to ensure that proper adjustments have been made to their academic records. The courses will be entered into the student's record with Villanova credit without a grade. In some cases, the Advanced Placement or International Baccalaureate results may allow the student to place out of a lower level course, but will not be counted as credit.

The following AP courses will receive Villanova credit if a student receives a score of 4 or 5:

U.S. History (07); Art /Art History (13); Biology (20); Calculus (66 or 68); Calculus Subgrade (69); Chemistry (25); Computer Science (31); Economics (34 and 35); English (36 or 37); European History (43); Chinese Language and Culture (28); French (48); Japanese Language and Culture (64); Italian Language and Culture (62); Latin (60); Environmental Science (40); Human Geography (53); Physics (80 or 82); Political Science (57 or 58); Psychology (85); Spanish (87 or 89); Statistics (90); World History (93).

Only International Baccalaureate Higher Level course work will be considered for credit. The following Higher Level IB courses will receive Villanova credit if a student receives a score of 6 or 7: Anthropology; Biology; Chemistry; Computer Science; Computer Science Information Technology; French A; English; Economics; Geography; History: Americas; History: Europe; Italian; Latin; Mathematics; Mathematics Further; Music; Philosophy; Physics; Psychology; Spanish A. Students also receive credit for score of 5 in Computer Science H L, Computer Science Information Technology, English, Economics, Geography, and Mathematics Further.

Credit by Examination. Qualified matriculated students may test out of selected courses and receive full credit for them. Such courses are graded on a "Satisfactory/Unsatisfactory" basis; however, a failing grade will not appear on the student's transcript. Applications and information are available in room 107, St. Augustine Center.

Transfer within the University. When a student transfers from one college to another within the University, the Dean may delete from the computation of the Grade Point Average courses which are not applicable to the new program. However, if such a student returns to her or his previous college, the Dean of that College will notify the Registrar to reinstate those courses. The grades and any

credits earned will again be computed in the Grade Point Average.

Pre-Matriculated College Credit. College-level work completed prior to high school graduation, including college courses that fulfill high school graduation requirements, may be awarded transfer credits upon receipt of the following:

(1) an official letter from the high school principal, secondary school counselor or other educational professional describing the college-level program of study; (2) an official letter from the college/university stating that the courses were taught by members of the regular faculty, open to enrollment by and graded in competition with regularly matriculated undergraduates at the college and a regular part of the normal curriculum published in the college catalog; (3) a course syllabus; and (4) an official, seal-bearing transcript from the college/university showing a grade of C or better. Credit or advanced standing for courses taught at the high school will not be accepted. With respect to courses taught in a distance learning format, and for other requirements, each academic program will review on a case by case basis. Each supporting document is to be sent to the Dean of the College in which the student is enrolling. All pre-matriculated credit must be accepted and approved before the completion of two semesters at Villanova.

Tuition and Fees 2021-2022

Undergraduate Colleges and Programs Tuition (Per Year) ¹

	Tuition	Per Credit Rate	General Fees*	Student Health Fees
All Undergrad Colleges	\$58,290	\$3,239	\$360	\$370

Villanova begins producing Fall semester bills in July (due in August) and Spring semester bill in November (due in December)

Semester charges are:

Semester Tuition Rate	Per Credit Rate	General Fee	Student Health & Wellness Fee
\$29,145	\$3,239	\$180	\$185

1. Per credit rate is charged for students registered in 1-8 credits in a semester.
2. An Orientation Fee is charged to first year students -\$250.
3. Full-time enrollment for federal, state, and institutional aid is defined as 12 or more credits a semester.
4. Athletic aid and participation, housing access, etc. is also defined as 12 or more credits a semester.

Fees

Application Fee (Non-refundable)	\$80
Tuition Deposit (Non-refundable) (Deposit due upon acceptance; credited to account upon registration)	\$700
Orientation Fee (New Students only)	\$250
Late Registration Fee	\$25
Student Health and Wellness Fee	\$185/semester
General University Fees	\$180/semester
Nursing Pre-Licensure Exam Fee	TBD
Room (Depending on Accommodations)	\$3,843-\$5,743 /semester
Board (Depending on Meal Plan)	\$2,220 -\$4,310 (\$1,155 available for commuter/semester)

Reinstatement Fee	\$250
Late Payment Fee ²	\$200
Returned Check Charge	\$30
Monthly Service fee for Past-due Accounts	\$10/month
Parking Fee (Annually for students using University parking lots)	\$100

¹Subject to change at the discretion of the University Administration.

²A Late Payment fee is charged to any account which is not paid in full by the official first day of class.

Once a student is registered, they will receive a bill and tuition is due by the due date shown on the bill. If a student registers after the due date, payment will be due upon receipt of the bill. Registration or the release of academic records cannot be completed until all financial obligations have been settled with the Bursar's Office. In addition to the above expenses, students should include expenses for textbooks, laundry, clothing, personal effects, and travel between the University and their homes in their educational costs.

Tuition for International Studies. Villanova charges current students full tuition for all Fall and Spring term International Studies programs. Villanova students will be eligible to use Villanova University financial aid (i.e. grants and scholarships) to assist with study abroad tuition costs as long as those funds do not carry policy constraints or conditions which would restrict their use for this purpose.

If a recipient institution's tuition exceeds Villanova's, the University is obligated to pay a maximum amount equal to that of the normal Villanova tuition for that academic term's undergraduate tuition. Villanova will not pay for room, board, travel, books, brokerage or associated non-academic fees of an international studies experience.

There are special considerations for students on tuition remission programs. These students should check with the International Studies program for details.

College of Professional Studies, Tuition and Fees 2021-2022

Application Fee (Non-refundable)	\$50
Late Registration	\$25
Tuition Evening Rate	\$706 (per credit)
Tuition Day Rates	\$1,172 (per credit)
General University Fee	\$15/semester
Reinstatement Fee	\$250
Late Payment Fee ²	\$200
Monthly Services Fee for Past Due Accounts	\$10/month
Returned Check Charge	\$30
Parking Fee ³	\$50 (Night Courses) \$100 (Day Courses)

¹ Subject to change at the discretion of the University Administration.

² A Late Payment fee is charged to any account which is not paid in full by the official first day of class.

³ Annually for evening students. For students taking day courses, the fee is \$100. *NOTE:* Registration or the release of academic records cannot be completed until all financial obligations have been settled with the Bursar's Office.

Refund Schedule. Fall/Spring Semester Refund Policy

<u>Segment of Semester</u>	<u>Refund</u>
Up to first week	80%
Up to second week	60%
Up to third week	40%
Up to fourth week	20%
Beyond fourth week	No Refund

(For Summer Semester policy, please see Bursar's website:
<https://www1.villanova.edu/villanova/finance/bursar.html>)

Refunds as a result of official withdrawal will be made according to the following schedule. Excluded from the refund calculation will be the costs related to on-campus housing and university meal plans. Activity, library, and medical fees are not refundable. There will be no refund for unauthorized withdrawals. Students who do not register or who notify the Registrar's Office prior to the first day of class that they will not enroll are entitled to a full refund.

In addition to the University's refund schedule and in accordance with the Higher Education Amendments of 1992, if a student completely withdraws from the University and has utilized Federal Title IV funds (e.g. Federal Pell Grant, Federal

Supplemental Educational Opportunity Grant [SEOG], Academic Competitiveness Grant, National SMART Grant, Federal Perkins Loan, Federal Direct Stafford Student Loan, Federal Direct PLUS, Federal Direct Graduate PLUS), during the semester in which they withdraw, the University will observe the federally mandated process in determining what, if any amount of money must be returned to the federal program (s). For more information on the Return of Title IV Funds please visit:

http://www.villanova.edu/enroll/finaid/policies/title_iv.htm

Financial Assistance: The cost of a college education is a major concern facing parents and students. Villanova University recognizes this fact and attempts to provide a comprehensive package of financial assistance consisting of need-based grants, loans, and student employment. In addition to these need-based programs, Villanova offers several merit-based scholarships.

Scholarships. Listed below are scholarship programs awarded by the University to entering first- year students.

Presidential Scholarships. The Presidential Scholarship is a renewable, merit-based award covering full tuition, room, board (up to 21 meals-per-week plan), general fee, and the cost of textbooks for eight semesters. Presidential Scholars are transformational leaders both on and off campus who have demonstrated a love of learning and a commitment to enhancing both their local and broader civic communities. Villanova Presidential Scholars represent diverse intellectual, social, ethnic, and economic backgrounds. Each year, of the 24 Presidential Scholarships, 6 scholarships are reserved for candidates from historically underrepresented groups; including African American/Black, Latino/Hispanic, American Indian/Native Alaskan, Asian/Pacific Islander, first in their family to pursue a college education, and low income (generally Federal Pell Grant eligible) students. Students must be nominated by the chief academic officer of their high school (principal, president, headmaster), secondary school counselor or an official school designee. They can also be nominated by a representative from a home school entity or non-profit educational organization dedicated to helping disadvantaged high school students with the college search process.

Nominees will be expected to show evidence of superior academic performance as reflected by their high school course selection and grade point average, as well as a high level of achievement on the SAT or ACT. Candidates will also be assessed in terms of leadership, civic engagement, ability to respond effectively to adversity, creativity, and expertise in a specific field. Candidates will be required to complete a series of short essays to supplement the nomination

form. The average weighted high school grade point average of candidates selected as finalists for the Presidential Scholarship in the Fall 2017 entering freshman class was 4.33 (on a 4.00 scale); the average combined SAT score (Evidence- Based Reading and Writing and Math) was 1500 and the average ACT was 34.

For more information regarding the Presidential Scholarship Program, application deadlines and the nomination process, visit the following websites: Center for Research and Fellowships:

<https://www1.villanova.edu/villanova/provost/crf.html> and The Center for Access Success and Achievement: <https://www1.villanova.edu/villanova/provost/casa.html>.

For more information regarding the Program's particular commitment to enrolling Underrepresented Students, contact the Center for Access Success and Achievement at 610-519-4075.

The Saint Augustine Scholarship. No new St. Augustine Scholarships will be awarded after August, 2019. Students who have already received the award will continue with the scholarship assuming they continue to meet the criteria set out in their scholarship letter.

St. Martin de Porres Scholarship. Villanova University offers St. Martin de Porres Scholarships to serve the University's goal of attracting a richly diverse and talented population of undergraduate students. St. Martin de Porres Scholarships are valued at full tuition and general fees. To be eligible for consideration, applicants must be U.S. citizens or permanent residents from one or more of the most underrepresented groups at Villanova University, including (but not limited to) underrepresented racial and ethnic populations, economically disadvantaged backgrounds and/or students whose parents have not graduated from college. All applicants also must have exemplary high school records, leadership roles, and active involvement through service to the community. In honor of the history of this award, preference will be given to applicants living in the greater Philadelphia area, which is defined as Bucks, Chester, Delaware, Montgomery, and Philadelphia counties in Pennsylvania; Burlington, Camden, Gloucester, and Salem Counties in New Jersey; and New Castle County in Delaware.

To apply, you must have already submitted a completed application for admission as a first- year student. Then, you must submit the St. Martin de Porres Scholarship application no later than February 1 and the required essay by February 7. Applicants may apply for admission via Early Action, Early Decision (both November 1 deadlines) or Regular Decision (January 15 deadline). Additional information will be sent to you via email once your completed application is received. Incomplete applications for admission and/or scholarship will not be eligible for consideration. Finalists will be required to interview either in person or via Skype. The selection committee will review qualified applicants and notify recipients by April 1.

Denise McNair Memorial Scholarship. The Denise McNair Memorial Scholarship has been instituted in memory of Denise McNair who, on Sunday, September 15, 1963, died in the early days of the civil rights movement in a racially motivated bomb attack at the Sixteenth Street Baptist Church in Birmingham, Alabama. This Scholarship, valued at full tuition for eight consecutive regular semesters (not including summer), will be awarded to a first-year student who is a U.S. citizen from a traditionally underrepresented population and, who has demonstrated outstanding academic achievement and a commitment to family, religious faith, peace and justice. The McNair Scholarship is awarded every four years to an entering first year student. Therefore, this scholarship will next be awarded to an entering first-year student entering fall 2024.

To apply, you must have already submitted a completed application for admission as a first- year student. Then, you must submit the McNair Memorial Scholarship application no later than February 1 and the required essay by February 7. Applicants may apply for admission via Early Action, Early Decision (both November 1 deadlines) or Regular Decision (January 15 deadline). Additional information will be sent to you via email once your completed application is received. Incomplete applications for admission and/or scholarship will not be eligible for consideration. The selection committee will review qualified applicants and notify recipients by April 1.

Goizueta Foundation Scholars Fund. The Goizueta Foundation Scholars Fund has been instituted for the purpose of providing need-based scholarship assistance to those who have extensive personal interest, involvement, and experience in the Hispanic/Latino culture. The award (of a varying amount) is made to students who are U.S. Citizens or permanent residents and whose families currently reside in the United States, who come from communities or populations that have been historically underrepresented in the student body at Villanova, who have demonstrated financial need and who have demonstrated outstanding academic achievement. This award will be granted to two entering first-year students. This scholarship is renewable for a total of eight consecutive full-time undergraduate regular semesters (not including summer). Returning undergraduate students will be considered for scholarship renewal on the basis of their academic performance and financial need.

To apply, you must have already submitted a completed application for admission as a first- year student. Then, you must submit the Villanova Scholarship Interest Form no later than February 1 and the required essay by February 7. Applicants may apply for admission via Early Action, Early Decision (both November 1 deadlines) or Regular Decision (January 15 deadline). Additional information will be sent to you via email once your completed application is received. Incomplete applications for admission and/or scholarship will not be eligible for consideration.

Anthony Randazzo Endowed Presidential Scholarship. This award is a renewable, merit-based award covering full tuition, room, board (up to 21 meals-per-week plan), general fee, and the cost of textbooks for eight consecutive full-time undergraduate semesters that is awarded to one first-year African American/Black student. The chosen candidate must have demonstrated academic merit and financial need, been involved in community service and/or civic leadership activities, and reside in the city of Philadelphia, Pennsylvania.

To apply, you must have already submitted a completed application for admission as a first-year student. Then, you must submit the Villanova Scholarship Interest Form no later than February 1 and the required essay by February 7. Applicants may apply for admission via Early Action, Early Decision (both November 1 deadlines) or Regular Decision (January 15 deadline). Additional information will be sent to you via email once the required essay is received. Incomplete applications for admission and/or scholarship will not be eligible for consideration. Applicants are also required to complete the FAFSA and any applicable state grant application as the award may be reduced by any Federal Pell or state grant funding. This award was made possible by the generosity of Anthony T. and Marjorie Randazzo and family.

Villanova National Merit Scholarship. These awards, ranging from \$500 to \$2,000, are offered to top students who are designated as finalists by the National Merit Scholarship Corporation and who selected Villanova University as their first college choice. Students should file the Free Application for Federal Student Aid (FAFSA) and the CSS Profile so that the proper award amount can be determined.

Army ROTC. For recipients selected by the Army ROTC program, Villanova grants up to five scholarships. Villanova University agrees to fund U.S. Army scholarship winners with an amount not to exceed \$5,000 to be used for University room and board charges only.

Naval ROTC. Villanova University provides grants to NROTC scholarship recipients who are designated by the United States Navy. Villanova may award up to four partial scholarship annually to NROTC Scholarship recipients. These partial scholarships may be applied toward room or board expenses incurred at Villanova. To be eligible for consideration, a candidate must meet all minimum academic requirements of the St. Augustine Scholarship. The recipients of this award are selected after the successful completion of the first semester of their first year at Villanova by the Unit Commander.

Student Financial Aid. To apply for all types of student aid, prospective full-time first-year students must file the Free Application for Federal Student Aid (FAFSA) for consideration for federal and state aid and the CSS Profile for consideration of

University (institutional) aid. To receive priority consideration for financial aid, applicants must file the FAFSA and CSS Profile by November 1 (Early Decision); December 1 (Early Action) and January 15th (Regular Decision). Additionally, for students who wish to be considered for need based assistance, signed copies of the student's and custodial parents' and stepparent's (if applicable) U.S. or Puerto Rico Tax Returns, W-2 form(s) and 1099 form(s) must be submitted to the College Board Institutional Document (IDOC) Service no later than November 1 (Early Decision); December 1 (Early Action) and January 15th (Regular Decision). Late applicants will be aided only if funds remain available. Students and parents are also required to use the IRS Data Retrieval Tool to import their tax information from their filed federal tax forms directly into the FAFSA on the Web if selected for verification (see below). If unable to use the IRS Data Retrieval Tool the student and parent will need to submit a U.S. Tax Return Transcript to the Villanova University Office of Financial Assistance.

A limited number of accepted Full-time International Students may be reviewed for need- based Villanova University Grant Assistance. Applicants must file the CSS Profile by November 1 (Early Decision); December 1 (Early Action) and January 15th (Regular Decision) to receive consideration for need-based funding. International students are awarded two forms of funding: student employment and Villanova Grant. In addition to the CSS Profile, Villanova requires the following documentation to be submitted to determine financial need: A letter from each parent's employer verifying either the monthly or annual income, a Certificate of Finances verifying what their annual family contribution will be along with a bank letter to support their family contribution. The Certificate of Finances and bank letter are also requirements of the Admissions Office in generating the student's visa. International students, who are not funded in their freshmen year, will not be reviewed for funding in future years.

A limited number of accepted Full-time freshmen Undocumented students who live in the United States without an approved visa, or without permanent residency/citizenship may be eligible for consideration of need-based financial assistance. To receive consideration for financial aid, applicants must file the FAFSA and CSS Profile by November 1 (Early Decision); December 1 (Early Action) and January 15th (Regular Decision). Students and parents are also required to submit signed copies of their Federal Tax Returns and schedules (if applicable), along with copies of all Federal W-2, 1099 and/or 1099R forms. Undocumented students who are not funded in their freshmen year, will not be reviewed for funding in future years. Transfer students should consult the Office of Financial Assistance website: <https://www1.villanova.edu/university/office-of-financial-assistance.html> for additional information and application deadlines.

Students applying for admission through the College of Professional Studies or students seeking a second baccalaureate degree should consult the Office of Financial Assistance website: <https://www1.villanova.edu/university/office-of->

[financial-assistance.html](#) for additional information and application deadlines. Some programs of aid may not be available to these students.

All returning undergraduate students and Undocumented students who live in the United States without an approved visa, or without permanent residency/citizenship and wishing to be considered for federal or state aid must reapply and must file the Renewal FAFSA. Returning students who are new financial aid applicants must file an original FAFSA for consideration for federal and state aid. Returning undergraduate students must also complete the CSS Profile to be considered for University (institutional) aid. To receive priority consideration for financial aid, returning undergraduate applicants must file the FAFSA and CSS Profile by May 1. Both new and renewal applicants who are not Pennsylvania residents should file the appropriate application for State Grant consideration in their home state. Additionally, signed copies of the student's and custodial parents' and stepparent's (if applicable) U.S. or Puerto Rico Tax Returns, W-2 form(s) and 1099 form(s) may be requested and must be submitted to the College Board Institutional Document (IDOC) Service. Late applicants will be aided only if funds remain available. Students and parents are also required to use the IRS Data Retrieval Tool to import their tax information from their filed federal tax forms directly into the FAFSA on the Web if selected for verification (see below). (Returning students and parents are encouraged to use the IRS Data Retrieval Tool if their tax returns have been filed to facilitate the Renewal FAFSA application process.) If unable to use the IRS Data Retrieval Tool the student and parent will need to submit a U.S. Tax Return Transcript to the Villanova University Office of Financial Assistance.

Returning Full-time International Students who received need-based Villanova Grant funding are required to file the CSS Profile no later than May 1 in order to be reviewed for renewal of funding. The Certificate of Finances is not required after the student's first year. However, students and parents may be required to submit employer letters and bank letters supporting the family contribution.

Please refer to the section below titled Verification for additional information and/or requirements needed in order to receive financial assistance.

Throughout the application process prospective students are to check their Applicant Status Page. All enrolled students are to check on the completeness and status of their application via MyNova. Additionally, aid eligibility is posted to the Applicant Status Page and MyNova. Returning Undergraduate and Graduate students will be sent an email indicating when their financial aid eligibility is available to be viewed on MyNova. Freshmen and transfer students will be sent their original aid notice via regular mail and can also view their financial assistance package on their Applicant Status Page and MyNova, once a deposit is made. Once a student enrolls all subsequent award notices will be sent via email to the student's Villanova email address.

Additional information regarding the financial assistance process may be obtained via the Office of Financial Assistance website at <https://www1.villanova.edu/university/office-of-financial-assistance.html>. Students and families may also address questions or concerns to the Office of Financial Assistance via phone at 610-519-4010, fax 610-519-7599 or email at finaid@villanova.edu.

In addition to assistance from federal and state sources, students attending Villanova University may be considered for aid administered by the university which is provided through the generosity of individuals and organizations.

Villanova University believes the primary responsibility for meeting educational expenses belongs to both the parents and the student. However, Villanova University is committed to assisting with the needs of families for whom the needs analysis determines that they cannot afford the full cost of a Villanova education with financial aid packages from the following federal, state, private, and university sources:

Villanova University Grant. This need-based aid is an institutional grant based on the demonstrated financial need of the student and parent based on information on the FAFSA, CSS Profile, and tax documents. Students must be accepted/enrolled full-time (minimum of 12 credits per semester) in the day college in an undergraduate degree program and pursuing their first baccalaureate degree. All Villanova students must apply for need-based financial assistance each year to be considered for this program. This grant can most often be applied only to tuition charges billed by Villanova University during the academic year (i.e. during the Fall and Spring semesters) for a maximum of 8 semesters (4 years), excluding summer terms, including semesters in which you do not receive the grant, regardless of the fact that a student may still have remaining Federal Title IV eligibility. To be given priority consideration for the grant, students must meet the application deadline. The Villanova University Grant may be replaced by endowed scholarship funds.

Federal Pell Grant Program. This is a federal grant for students demonstrating exceptional financial need and accepted/enrolled in an undergraduate degree program. Application for Federal Pell Grants may be made by submitting an initial FAFSA or a Renewal FAFSA. Part-time students may be eligible for Federal Pell Grants.

Federal Supplemental Educational Opportunity Grant (SEOG). This is a federal grant administered by Villanova University based on financial need. Only undergraduate degree candidates are eligible. Priority consideration is given to Pell Grant recipients who are enrolled full-time.

Federal Nursing Student Loan. This is a federal loan based on financial need for

students accepted/enrolled in an undergraduate nursing program. The Federal Nursing Student Loan is a 5% interest loan and becomes payable nine months after leaving the University, or nine months after the student is no longer enrolled at least half-time or is no longer in a Nursing degree program. Entrance and exit interviews are required by federal law. Due to limitations in our funding levels we have not been able to award Federal Nursing Loan funds to part-time students.

Federal Work Study (FWS). This is a federal employment program based on financial need for students who are accepted/enrolled in either an undergraduate or graduate degree program. Students are given the choice to work on campus (or off-campus if Pennsylvania domicile) with salaries set according to the job description. Students receiving work-study awards are limited to earning the amount of their initial allocation. Once that limit has been reached, students should contact a Financial Assistance counselor concerning further work study employment. Current work-study job listings are posted on the Office of Human Resources website:

<https://www1.villanova.edu/villanova/hr.html>. Due to limitations in our funding levels we have not been able to award Federal Work Study funds to part-time or graduate students.

Pennsylvania State Grant. The Pennsylvania State Grant is based on financial need for students who qualify as Pennsylvania state residents and who are accepted/enrolled in an undergraduate program and enroll for at least six credits each semester. Eligibility is determined by the state. For State Grant consideration, students are required to file either an initial FAFSA or a Renewal FAFSA by May 1. Additional information on the Pennsylvania State Grant can be found at www.pheaa.org.

Other State Grants. Certain states allow residents to take their state grants into Pennsylvania for study at Villanova. Students are responsible for checking with the respective State Higher Educational Agencies for the correct application necessary for state grant consideration.

Outside Aid/Scholarships. Organizations outside Villanova University may provide scholarships or financial assistance to Villanova students. Students are responsible for consulting the individual organization for the proper applications and deadlines and for sending transcripts to the scholarship committee if required. NOTE: State, federal, NCAA and University regulations prohibit over awards. All outside scholarships, whether based on academic merit, financial need or as a result of a benefit provided by the parents' employer will be counted as a source of aid and will be added to the student's total aid package. This may result in a reduction of a Villanova University Grant or federal or state aid. It is the student's responsibility to notify the Office of Financial Assistance concerning any outside aid received.

Any change in a student's financial or academic status may result in an adjustment to his or her aid. The Office of Financial Assistance retains the right

to make any necessary changes.

Federal Direct Loan Program. This is an educational loan available to students accepted/enrolled on at least a half-time basis in an undergraduate or graduate degree program. Students must complete a Master Promissory Note (MPN) and Entrance Counseling with the U.S. Department of Education, who is the lender of the loan, at www.studentloans.gov. Eligibility for a Federal Direct Loan is based on cost of education, amount of other financial aid being received, as well as an expected family contribution towards educational costs. Students who demonstrate remaining financial need will qualify for the Federal Direct Subsidized Loan. Students without remaining financial need will be eligible for a Federal Direct Unsubsidized Loan and either need to make interest payments while enrolled or capitalize interest payments (i.e. add interest to the principal balance). Repayment of the Federal Direct Loan begins six months after the student leaves the University or is no longer enrolled at least half-time. The student has up to ten years to repay. The interest rate is currently fixed at 3.73% for the Undergraduate Direct Subsidized and Unsubsidized Loans, and 5.28% for the Graduate Direct Unsubsidized Loan. Any changes to the interest rate will be reflected on the financial aid website: <https://www1.villanova.edu/university/office-of-financial-assistance.html> should this occur. An origination fee of 1.057% for first disbursements after 10/1/2020 and before 10/1/2022. The fee goes to the government to help reduce the cost of the loan program. The maximum loan amount per year is \$3,500 for freshmen, \$4,500 for sophomores, and \$5,500 for juniors and seniors. Students may also qualify for an additional \$2,000 Federal Direct Unsubsidized Loan.

Additional information regarding the application process for the Federal Direct Loan program can be found on the Office of Financial Assistance website (<https://www1.villanova.edu/university/office-of-financial-assistance.html>) or the U.S. Government at www.studentloans.gov.

Family Financing Option. The Family Financing Option has been developed in order to provide students and families with a way through which they can manage the challenge of affording a Villanova University education. The Family Financing Option offers the family the opportunity to combine Interest-Free Monthly Payment Options offered by the Tuition Management System (TMS) Tuition Payment Plan with low cost loan options such as the Federal Direct PLUS Loan and an Alternative or Private Educational Loan. This is not a specific program of aid but opportunities to consider for meeting your educational expenses

Nelnet Campus Commerce (Nelnet) Tuition Payment Plan. The Nelnet Tuition Payment Plan allows students to spread their balance out over the semester for a small fee. There is no interest charged on the plan.. **Nelnet Campus Commerce (Nelnet)** administers the program for Villanova

University. Information on this program can be obtained via their website at <https://mycollegepaymentplan.com/villanova> www.afford.co or by calling them directly at 1-800-609-8056 .

Federal Direct PLUS Loan. Parents of dependent undergraduate students may be eligible to borrow up to Villanova’s cost of education minus estimated financial assistance. Eligibility for this loan is based on creditworthiness and the interest rate currently is fixed at 6.28%.

The Federal Direct PLUS Master Promissory Note can be obtained from the U.S. Department of Education at www.studentloans.gov. A FAFSA must also be completed in order to receive a Federal Direct PLUS loan. An origination fee of 4.228% of the principal amount of each Direct PLUS will be charged for loans first disbursed after 10/1/2020 and before 10/1/2022. The fee goes to the government to help reduce the cost of the loan program.

Alternative Loans. Alternative or Private Educational Loans are loans administered by private lenders. These programs may be used to bridge the gap between cost and traditional need-based and/or merit-based assistance. Alternative loans require that the borrower (the student) and/or a co-signer be evaluated in order to determine if they meet minimum credit standards. Students may choose any alternative lender they wish but should carefully compare all options before selecting a lender. Additional information regarding how to compare Alternative loans can be found on the Office of Financial Assistance website (www.finaid.villanova.edu).

Information About Subsequent Award years. Villanova University is committed to maintaining the total level of funding if the Expected Family Contribution remains similar from year to year. However individual components within the total funding package may change.

Need-based eligibility, including the Villanova University Grant could be affected (reduced or entirely removed) if the following circumstances occur in subsequent years:

- Any increase or decrease in the number of members in the household
- Any increase or decrease in the number of family members enrolled as full-time undergraduate students at a Title IV eligible college/university
- Receipt of outside aid (e.g. scholarships, state grants, tuition remission)
- Change in enrollment status from full-time to part-time
- Any increase or decrease in family income and/or assets
- The graduation, withdrawal or change to less than full-time enrollment from an undergraduate college, university or business, trade or technical school by members in the household. (A family’s choice to continue to fund graduate education for a sibling cannot be considered.)
- Change in housing status
- Student’s enrollment after 8 semesters (4 years)

Questions about how these circumstances could affect your aid should be addressed to the Office of Financial Assistance. We invite you to make an appointment to speak with a financial aid counselor if you anticipate there will be changes in the future so you can consider how that could affect your family's ability to pay for the entire academic period at Villanova.

Minimum Standards for Satisfactory Academic Progress for Financial Aid Applicants. Federal regulations require that an institution establish, publish, and apply reasonable standards for measuring whether a student, who is otherwise eligible for aid, is maintaining satisfactory academic progress in his or her course of study. The standards must be the same or stricter than the institution's standards for a student enrolled in the same academic program who is not receiving financial assistance. Listed below is the complete statement of Minimum Standards for Satisfactory Academic Progress for Financial Aid Recipients.

The purpose of this policy is to provide undergraduate students with information on Villanova University's Satisfactory Academic Progress Standard for Federal Title IV Sources of Aid (Federal Pell Grant, Federal Supplemental Educational Opportunity Grant [SEOG], Federal Work Study, Federal Direct Subsidized Loan, Federal Direct Unsubsidized Loan, and Federal Direct PLUS Loan), as well as other Federal and Villanova University Need-Based Aid (Federal Nursing Loan, Villanova University Grant, and Villanova University Endowed Scholarships). This document describes the qualitative and quantitative standards that make up this policy, how standards are measured, and how financial aid is reinstated if eligibility is lost during enrollment.

Process Overview. The Office of Financial Assistance is required, in accordance with Federal Title IV regulations, to monitor satisfactory academic progress for students who receive federal financial assistance. In order to continue to receive financial aid while enrolled at Villanova University, undergraduate students must maintain the minimum standards as defined below. The Satisfactory Academic Progress standards for financial aid, listed below, are either the same or stricter than the individual Colleges' academic policy for students enrolled in the same academic program who are not receiving financial assistance. Students must make both quantitative and qualitative progress towards their educational goals each academic year to receive federal and Villanova University need-based financial assistance. Villanova University's academic year consists of two regular semesters (fall and spring) and the summer sessions.

Qualitative Standard. Undergraduate students must maintain a minimum cumulative grade point average (GPA) of 2.00 calculated at the end of each academic year in order to be considered as a student making satisfactory academic progress for financial aid consideration. Only credits earned at Villanova University will affect the cumulative GPA calculation. The grade point

average from transfer coursework at a previous college or university will not affect a student's Villanova University grade point average. Quantitative Standard. Students must pass the minimum number of credit hours during the academic year associated with their enrollment status for that academic year. If a student is full-time, the student would be enrolled in a minimum of 24 credits for the academic year and must complete a minimum of 24 credit hours. If a student is enrolled three-quarter time for the academic year (9- to 11 credits per semester) the student must complete at least 18 credits per academic year. If a student is enrolled half-time for the academic year (6- to 8 credits for the semester), then the student must complete at least 12 credits during the academic year.

Credits are considered successfully completed when a grade of A, B, C, or D is earned.

Failures ("F" and "NF"), INCOMPLETES ("N"), WITHDRAWALS ("W," "WX", "Y"), MISSING GRADES ("NG"), Grade of Audit ("AU"), Grades of "In Progress" ("IP") are not successfully completed credits.

Repeated Coursework. As defined by the U.S. Department of Education, Villanova University will include and fund any repeated coursework previously taken by the student in his or her enrollment status one time. Villanova University will only allow a student to retake previously passed coursework one time and count the coursework in the student's enrollment status (e.g., the student is retaking the coursework in an attempt to meet an academic standard such as a better grade) for financial aid consideration.

A student may not receive Federal or Villanova University funds to retake previously passed coursework if the student is required to retake the course due to the student failing other coursework. For example, if the student is enrolled in four classes in the fall semester and fails one of those courses, the Dean may require the student to repeat the previously passed three courses along with the course that the student failed. If the student retakes the four courses in the spring, only the course that the student failed may be counted toward the student's enrollment status.

Pace (Maximum Timeframe). Within the Satisfactory Academic Progress Policy, Villanova University is required to establish a maximum time frame in which students must complete their program of study in order to remain eligible for financial aid funds. The maximum time frame for degree completion at Villanova University for an undergraduate student as defined by the U.S. Department of Education is 150% of the student's program(s) required credits.

Once a student reaches the maximum amount of credits attempted as specified by the program(s) for graduation, the student will be ineligible to receive further Federal Title IV aid. Students in this category may submit appeals in accordance

with the Appeals section of this policy.

Note: The Villanova University Grant is only offered for a maximum of four academic years (eight semesters), excluding summer terms regardless of the fact that a student may still have remaining Federal Title IV eligibility.

Measuring Academic Progress. Academic Records are reviewed by the Office of Financial Assistance at the end of each academic year in May after spring grades are entered. Measurement begins with the Fall semester and ends with the last summer session. Students who were enrolled during the Fall and/or Spring semesters and who failed to meet the qualitative and/or quantitative requirements for academic progress can attempt to complete additional credits and raise their cumulative GPA during the summer sessions at Villanova University. Upon completion of additional credits, a new determination of academic progress will be made.

All financial assistance applicants are subject to the Satisfactory Academic Progress Standards regardless of whether or not they received financial assistance previously. When the Minimum Standard of Academic Progress is Not Achieved. A student who does not make satisfactory academic progress will be placed on financial assistance suspension until the requirements are met. During this suspension, a student is denied Federal and Villanova University aid. The student will be notified in writing of the financial assistance suspension. Appeals. If a student has failed to achieve satisfactory academic progress, the student can appeal the decision to the Office of Financial Assistance. The appeal must be submitted in writing and specify the extenuating circumstances which prevented the student from achieving academic progress. The following types of mitigating circumstances may be considered when a student appeals, and are listed, as follows: injury or extended illness of the student, death in the family, or a change in educational objectives. Mitigating circumstances do not include the withdrawal from classes to avoid failing grades, pursuing a second major or a second degree. The student must explain what has changed that will allow him/her to make satisfactory academic progress by the end of the semester. A copy of the student's academic plan developed in conjunction with the student's faculty advisor, academic dean or his/her representative also must be submitted. The Office of Financial Assistance may request additional documentation and/or require a personal interview with the student.

Students must appeal within two weeks of receiving a notice from the Office of Financial Assistance of the financial aid suspension. Appeals will not be accepted after the two-week period has passed and the student will be responsible for all charges on their student account. The student will receive a reply from the Office of Financial Assistance within two weeks of receipt of their appeal.

A student who is denied assistance based on qualitative or quantitative standards will be considered for assistance when standards have been achieved.

Academic Plan. The academic plan is a written document developed by the student and his/her college that ensures the student is able to meet the University's Satisfactory Academic Progress Standards by a specific point in time. It could include qualitative and quantitative requirements necessary to achieve that plan. The academic plan could take the student to completion of their program rather than meeting the University's Satisfactory Academic Progress standard at a specific point in time as determined by an appropriate academic official.

Financial Aid Probation. Villanova University will assign this status to a student who fails to make satisfactory academic progress and who has successfully appealed and had eligibility for aid reinstated. If the Office of Financial Assistance determines that the Academic Progress Standards can be waived for one semester, the student will be placed on Financial Aid Probation. As part of the student's Financial Aid Probation, the Office requires a student, along with their academic advisor, to develop and submit an academic plan that includes a strategy of improving progress and reaching the student's educational goals. A student placed on Financial Aid Probation may receive Federal and Villanova University funds for one semester. The student will be required to meet the University's Satisfactory Academic Progress standards at the end of the semester or meet the terms and conditions of their academic plan as well as the plan established by the academic advisor.

At the end of the probationary semester, the Office of Financial Assistance will determine if academic progress requirements have been met or if the student continues on the path of the designated academic plan. If requirements have been met, the probationary status will be removed. If academic requirements have not been met, and the student has deviated from the academic plan, the student may not receive Federal or need-based Villanova University funds for the following semester. A student may only be granted one semester of Financial Aid Probation during their academic career.

Reinstatement of Financial Aid. Once financial assistance has been discontinued, it will be reinstated provided:

- The student has successfully achieved the required number of credits and cumulative grade point average; and,
- The student has requested reinstatement in writing.
- Reinstatement is not automatic. The student is responsible for making certain that the grades and credits completed have been properly posted to the academic transcript with the Office of the Registrar prior to requesting reinstatement of financial assistance.

Students are encouraged to file all financial assistance application forms by Villanova University's established deadline so that once reinstatement has been achieved, he or she can be considered for assistance as quickly as possible.

Students Returning After a Year or More. If a student previously left the university after failing to make satisfactory academic progress and returns to the university, the student is required to appeal his/her status. The student must submit an academic plan. If the appeal is granted, the student is placed on financial aid probation for one semester.

The student's academic status will be reviewed after the semester to determine if the student successfully made satisfactory academic progress.

Return of Federal Title IV Aid. If a student completely withdraws from the University and has utilized Federal Title IV funds (e.g., Federal Pell Grant, Federal Supplemental Educational Opportunity Grant [SEOG], Federal Direct Loan, or Federal Direct PLUS Loan, Federal Direct Graduate PLUS Loan) during the semester in which they withdraw, the University will observe the federally mandated process in determining what amount of money, if any, must be returned to the federal program(s).

Students who intend to withdraw from the University must complete the process as outlined in the University Catalog under the Academic Policies section. In cases where a student has received federal financial assistance during that semester, the Office of Financial Assistance will determine what, if any, adjustment must be made. This determination will be based on the formula prescribed in the federal regulations for the return of Title IV funds. This determination is made on the basis of the number of calendar days completed in the semester prior to the student's notification to withdraw, divided by the total number of days in the semester. If the resulting percentage is greater than or equal to 60%, no return of federal funds will take place.

If the percentage is less than 60%, this percentage will be used to determine the portion of Title IV aid that has been "earned". The remaining amount must be returned in the following order:

- Federal Direct Unsubsidized Loan Federal Direct Subsidized Loan
- Federal Direct PLUS/Federal Direct Graduate PLUS Federal Pell Grant
- Federal SEOG Other Title IV Aid

NOTE: Refunds as a result of official withdrawal or leave of absence will be made in accordance with the University's refund policies which appear in the Tuition and Fees section of the Catalog.

A student who withdraws or takes a Leave of Absence from an online program will have their last date of attendance measured by their last academic related participation via their appropriate system. Academic activities include but are not limited to:

- Submitting an academic assignment
- Taking an exam, an interactive tutorial, or computer-assisted instruction
- Participating in an online discussion about academic matters
- Attending a study group that is assigned by the institution

- Initiating contact with a faculty member to ask a question about the academic subject studied in the course
- The academically related activity is NOT defined by:
- Logging into an online class without active participation
- Participating in academic counseling or advisement

For all programs offered in modules, a student is considered to have withdrawn for Title IV purposes if the student ceases attendance at any point prior to completing the module, unless the school obtains written confirmation from the student at the time of the withdrawal that he or she will attend a module that begins later in the same payment period (semester). If a school obtains a written confirmation of future attendance but the student does not return as scheduled, the student is considered to have withdrawn from the payment period (semester). A return of Title IV calculation will be processed at that time. Students are required to return written confirmation within two weeks of being contacted by the Office of Financial Assistance. If not returned, a withdrawal calculated will be conducted. If the amount of money that must be returned to Title IV programs exceeds that which exists in the students account as a result of the University's refund policy, the student will be notified as to the amount of any grant money that must be repaid. This repayment must take place in order for a student to reestablish eligibility to receive federal funds in the future. Any loan proceeds must be repaid and will become part of the normal repayment procedures for the loan program.

Citizens and Eligible Non-Citizens. In order to receive federal or state financial assistance, a student must be a U.S. Citizen, a U.S. National, a U.S. permanent resident who has a Permanent Resident Card (Form I-551, since 1997) or Resident Alien Card (Form I-551, before 1997), or an otherwise eligible non-citizen with a temporary resident card (I-688); or must possess one of the following:

A Form I-94 (Arrival-Departure Record) with an appropriate endorsement;
 A Form I-181 or I-181B that has been signed by a U.S. Citizenship and Immigration Services (USCIS) district director; An official statement granting asylum in the US: or

Other proof from the U.S. Citizenship and Immigration Services (USCIS) that one is in the U.S. for other than a temporary purpose.

Students should check with the Office of Financial Assistance at Villanova University to see what documents are required. Students in the U.S. on an F1 or F2 student visa only, or on a J1 or J2 exchange visitor visa only, may not receive federal or state student aid, nor can those who possess only a notice of approval to apply for permanent residence (I-171 or I-464A).

Limited need-based University funds are available to International Students and Undocumented students who live in the U.S. without an approved visa, or without permanent residency/citizenship. For complete application information

check the International Students Services Office website:

https://www1.villanova.edu/villanova/studentlife/be_empowered/international_students.html

Verification. Verification is a requirement of the U.S. Department of Education and is the process of confirming information submitted for consideration of the various Federal Title IV Funds including the Federal Pell Grant, Federal SEOG and Federal Direct Loans. Applicants should be aware that this federal regulation requires them to submit tax data and other requested information to the Office of Financial Assistance before the processing of student loan applications and/or the awarding of funds. Students must submit the required information to complete the verification process no later than 45 days before the last day of the student's enrollment. Failure to comply with the verification requirements within the timeframe will result in the loss of funds.

Only students selected for verification by the U.S. Department of Education based on information on the FAFSA and determined by criteria set by the U.S. Department of Education or selected by a counselor will be verified. Items to be verified include: adjusted gross income; U.S. income taxes paid; number of family members for whom parents provide more than half of their support; the number of children in post-secondary schools who are enrolled at least half time; dependency status; untaxed income; eligible non-citizen status and any other item for which conflicting information has been submitted to the Office of Financial Assistance. Students selected for verification will be required to submit additional documents. These additional requirements will be reflected on the student's Applicant Status page (prospective students) and on the MyNova account (enrolled students).

Documents/Data Required. For dependent students): signed copies of custodial parents', stepparent's (if applicable) and student's U.S. or Puerto Rico income tax returns, W-2 form(s) and 1099 form(s).

Transfer of financial data from the IRS Data Retrieval Tool or submission of U.S. Tax Return Transcript (see IRS DATA Retrieval Tool for more information)
(For independent students): signed copy of the student's (and spouse's if applicable) U.S. or Puerto Rico income tax return and W-2 forms.

If the student or custodial parent or stepparent (if applicable) did not file taxes or if a foreign tax return was filed, a signed non-tax filer statement and copies of all W-2 forms or proof of earnings must be submitted. Non-taxable income verification such as VA Benefits, Social Security Benefits for all household members and Public Assistance Letters must be submitted to the Office of Financial Assistance. CSS Profile for prospective students and all returning undergraduate students. *The CSS Profile form is required for consideration for institutional aid only.*

IRS Data Retrieval Tool. The U.S. Department of Education in conjunction with the Internal Revenue Service (IRS) uses the IRS Data Retrieval Tool, a feature that allows students and parents to import their tax information from their filed

U.S. tax return directly into the FAFSA on the Web. The IRS Data Retrieval Tool may be used when filing the initial FAFSA, or the renewal FAFSA each academic year. In order to access the tool, FAFSA site users must have a valid social security number, an active Federal Student Aid ID (FSA ID), and must have filed their federal tax returns with the IRS.

The IRS Data Retrieval Tool may be used either while completing the online FAFSA or after the online FAFSA has been submitted. If accessing the IRS Data Retrieval Tool during FAFSA completion, the user will be given the opportunity to utilize the tool during the completion of the income questions on both the student and parent FAFSA sections. If the decision to use the IRS Data Retrieval Tool is made after initial FAFSA submission, the user may then log into the FAFSA website: <https://fafsa.ed.gov/spa/fafsa> with their FSA ID and complete the following steps:

Click 'Link to the IRS' to be transferred directly to the IRS website
<https://www.irs.gov/>

If you already have used the IRS Data Retrieval Tool to transfer your tax return information into your FAFSA application, click the "View Option to Link to the IRS" hyperlink

Once on the IRS website, enter the requested user-verification information exactly as it appears on the tax return. Use the FSA ID for the person whose tax information is being transferred.

Choose to transfer the tax information from the IRS into the FAFSA. If you use the IRS Data Retrieval Tool to transfer your tax return information from the IRS, the information will not display on your FAFSA. For your protection the answer to each question is replaced with "Transferred from the IRS."

Those who are exempt from and unable to use the IRS Data Retrieval Tool include: students and parents who are married and filed separate federal income tax returns for the applicable tax year, are married and filed as Head of Household, students and parents whose marital status changed prior to the end of the applicable tax year, students and parents who filed an Amended Tax Return for the applicable tax year, and filers of foreign and Puerto Rican tax returns.

If you are not able to use the IRS Data Retrieval Tool and filed a U.S. tax return, you will need to submit a U.S. Tax Return Transcript to the Villanova University Office of Financial Assistance. Students and parents may request an official copy of their U.S. Income Tax Return Transcript from the IRS at [IRS.gov](https://www.irs.gov). Your parent(s) should sign the Tax Return Transcript and mail or fax it to the Villanova University Office of Financial Assistance. For more complete instructions consult the Office of Financial Assistance website:

<https://www1.villanova.edu/university/office-of-financial-assistance.html>.

Online Undergraduate Programs. Students attending an online undergraduate degree program are pursuant to the same federal financial aid policies as traditional undergraduate degree programs held on campus. Consult the Office of Financial Assistance website for specific application processes and deadlines. The information that follows includes specific information related to the disbursement of funds and the payment of funds to our third-party administrative partner, BISK (formerly known as University Alliance).w

Disbursement of Federal Student Aid. Federal Student Aid funds are required to pay directly to students' Villanova University accounts in equal disbursement amounts. The disbursement date is set after the drop period has ended.

Please note that students will need to be enrolled in at least 6 credits per semester to be eligible for "half-time" status and Federal Direct Loans. "Half-time" status is defined accordingly:

- MUST be enrolled in 6 credits for Session I of the semester OR
- MUST be enrolled in 6 credits for Session II of the semester OR
- MUST be enrolled in 3 credits for Session I and 3 credits for Session II for the semester**

**For this option, students must be enrolled in all 6 credits at the start of Session I in order to receive Federal Direct Loan disbursement. Otherwise, the Federal Direct Loan will not be awarded or disbursed.

A student may not combine credits from another semester's session or term to qualify for half-time status. For example, a student who enrolls in Summer Session II for 3 credits and then Fall Session I for 3 credits cannot combine those terms for half-time status and Federal Direct Loan eligibility. The student in this scenario would be considered less than half-time.

Once federal financial aid has disbursed at Villanova, the Office of Financial Assistance will conduct a review of the student's financial aid award. This review ensures the cost of attendance matches the student's original plan of enrollment, and that any outside sources of aid, tuition discount, or employer tuition assistance, etc. have been included as resources for the student. The Office of Financial Assistance also reviews to ensure the student is enrolled for the specific session the grant and/or loan disbursement was received.

Remitting payment to BISK and Refunding Loan Disbursements. Bisk (formerly known as University Alliance) manages the billing of charges for the undergraduate online RN-BSN program. Any billing inquiries should be sent directly to Bisk. Students who receive Federal student aid funds or a private education loan will be able to view their disbursement of financial aid through the MyNova student portal; ALL financial aid disburses directly to Villanova University.

Villanova University will send the financial aid disbursement (federal and private educational loans) directly to the student who is then responsible for submitting payment to Bisk for tuition and/or book charges. In order to expedite the processing of a refund, it is highly recommended that students enroll in direct deposit through our e- Refund process. The e- Refund enrollment form can be found in your MyNova account, in the Student's Tab under Bursar Links.

If a student still has a remaining balance with Bisk after the full financial aid disbursement has been remitted for a semester, then the student will need to seek additional payment arrangements to cover the remaining charges (such as applying for a Direct PLUS loan, a private loan etc.). Students should contact their Student Services Representative at 1-855-300- 1473 or via email at studentservices@villanova.edu.

Upon the registration of courses, students will receive an intent to Enroll form from Bisk via email detailing their tuition and/or book charges for that term. Questions about the billing process should be directed to the Student Services Representative at Bisk at 1-855-300- 1473 or via email at studentservices@villanova.edu. Please note that if a student is not utilizing financial aid, all payment arrangements need to be made directly with Bisk.

Academic Policies. The following policies and regulations, along with those of the individual colleges and programs, govern academic life at the University. In order that the programs offered reflect current advances in and additions to knowledge and changes in professional requirements, the University and each of its colleges reserves the right to change program requirements without prior notice. Unless otherwise specified, students are bound by the policies and regulations in effect when their entering class begins its first year of study. *It is the responsibility of the student to know and comply with the academic policies and regulations of the University and their respective colleges.* Students should consult the individual college sections of this Catalog and the special publications and guidelines issued by the colleges and departments.

Academic Dismissal. A student who has not met the academic standards of a college (as determined by the Academic Standing Committee and Dean of that college) will be dismissed from the college. The college dean will inform that student of the dismissal as soon as possible. Typically the student will be allowed to appeal that dismissal to the dean of the college. There is no additional process of appeal beyond the college dean. In some cases (e.g., when the student has had previous warnings or been on probation), the student may, at the determination of the college, be dismissed without right of appeal.

Once a student has been dismissed from the college without right of appeal or once the appeal process has been exhausted, the student may not enroll in

additional credit-bearing classes at Villanova, and may not remain in a University Residence Hall. A student who is dismissed from a college is dismissed from the University effective with the sending of the college dismissal letter. The college that dismisses the student will send a list of the dismissed students to the Office of the Provost. The Office of the Provost will compile a list of all students dismissed by the colleges and remove the names of students who are accepted to another Villanova college before sending the list of dismissed students to the Registrar, the Bursar, Residence Life and other appropriate university offices.

A student who has been dismissed from a college is eligible to apply to that college for readmission after two semesters (including the summer) have elapsed. For example, a student who is dismissed at the end of the fall semester may apply to be admitted for the following fall semester. The college reviewing the application will include a review of past discipline at Villanova University as well as whether the student has been dismissed by another College within Villanova University. A student who has been dismissed and then returns to the University will be treated as a continuing student, not a transfer student, for purposes of policies regarding courses taken elsewhere; in other words, such a student would not be permitted to transfer courses taken at a two-year institution.

If the student is already enrolled in spring semester courses when the dismissal letter is sent, the student must withdraw from those courses and leave his/her residence hall. Tuition for the spring semester will be refunded. Students enrolled in summer courses at the time the final dismissal letter is sent must also withdraw from those courses, with tuition for the summer semester refunded. If a student has formally applied to another Villanova undergraduate college (see #5 below), a student may remain in classes and residence halls until a final decision is made.

A student who has been dismissed from Liberal Arts and Sciences, School of Business, Engineering, Nursing or the College of Professional Studies may apply at any time (either immediately or at any subsequent date) for admission to another Villanova undergraduate college. Such a student does not have to go through the University admissions' process. The request for readmission will be handled by the college to which the student has applied. The college reviewing the application will include a review of past discipline at Villanova University as well as whether the student has been dismissed by another College within Villanova University. If the student is accepted in another college immediately (normally within ten business days) after dismissal from the first college, or if the dismissed student is a science student who is accepted into the Arts division of the College of Liberal Arts and Sciences, s/he may continue to take courses and continue to live in the Residence Halls without interruption. The college into which the student is accepted must immediately notify the Registrar, the Bursar, and Residence Life that the student has now been accepted into another college.

Academic Standing. Villanova uses three related policies to define Academic Standing: Grade Point Average; Academic Progress and Academic Probation. The correct interpretation of all three policies is that all students who are making sufficient progress toward their degree and who are eligible or have been allowed to register and take academic course work at Villanova for the current term are considered in good academic standing. Students placed on “Academic Probation” are considered to be in good academic standing since they are making satisfactory progress toward a degree and are still authorized to continue studying toward their degrees. Academic Probation only serves as an academic warning that a student is in danger of not meeting minimum academic retention standards and being terminated from the University.

Quality Point Averages. In addition to passing all courses taken the student is also required to maintain a specified grade average leading to graduation with a college degree. The average is derived from the grades and credit hours of the courses taken and is known as the quality-point average. It is determined by multiplying the number of credits for each course attempted by the allotted quality points for the grades received and dividing the total quality points by the total credit hours attempted. Quality points for grades are as follows: A=4.00; A-=3.67; B+=3.33; B=3.00; B-=2.67; C+=2.33; C=2.00; C-=1.67; D+=1.33; D=1.00; D-=.67.

Academic Progress. To qualify for a Bachelor's degree, a student, in addition to completing all the studies prescribed for the degree sought, must earn a cumulative quality point average of at least 2.00. Most Full-Time students earn their Baccalaureate degree in four years. Full- Time students who do not complete the Baccalaureate degree within six years and part-time students who do not complete the Baccalaureate degree within twelve years may need to take additional courses in order to meet degree requirements. Any student who has not completed the degree within twelve years must complete a degree through the College of Professional Studies. If the degree or major pursued by the full-time student is not offered by the College of Professional Studies, then the former full-time student must choose a degree and/or major offered to College of Professional Studies students. In circumstances involving those students who have entered Villanova University through the Academic Advancement Program, satisfactory progress of the student will be determined by the Academic Standing Committee and/or Dean of the college in which the student is matriculated.

Academic Probation. The records of students whose cumulative or semester quality-point average falls below 2.00 will be reviewed by the Academic Standing Committee of their college for appropriate action. Students in business, science or engineering whose technical course quality-point average falls below 2.00 will also come before the committee. Typically, the student will either be placed on academic probation or dismissed. While on academic probation, students are limited to a schedule of courses determined by the Academic Standing Committee

of their College. A student on academic probation will normally be allowed only one semester to achieve the required quality-point average.

Honors. At graduation students receive honors of three kinds -- summa cum laude, magna cum laude, and cum laude -- after being approved for such honors by the faculty and administration of the University. To be eligible for these honors, students must attain a minimum cumulative quality-point average of 3.90, 3.75, 3.50, respectively, and at least sixty credits of course work (not including Satisfactory/Unsatisfactory courses) must have been taken at Villanova University.

Repeat Freshman Year. The Academic Standing Committee may allow a freshman student to declare academic bankruptcy and repeat the semester or the year with a new start on the cumulative average (though a record of the year's work will remain on the transcript). Once a course is bankrupted the action is permanent and cannot be reversed.

Complaints about Faculty and Grades. Villanova University has a set of procedures for resolving student complaints about faculty performance or about grades. A student who has concerns about either of these issues should, if at all possible, discuss the problem directly with the faculty member. If this is not possible, the student should contact the faculty member's department chair or program director who will provide the student with a copy of the procedures and, if the student wishes, review the process involved. If the student is, for good reason, reluctant to contact the department chair, the student may also contact the Dean of the faculty member's college. The procedures are also online under Student Services and Information on the Provost website:
<https://www1.villanova.edu/villanova/provost.html>.

Class Attendance. Class and laboratory attendance for first-year students is mandatory. A first-year student will receive a grade of "Y" (failure) whenever the number of unexcused absences in a course exceeds twice the number of weekly class meetings for the course.

For students beyond the first year, attendance policies are determined by the instructors of the various courses. The instructor's class attendance policy must appear in the syllabus and at a minimum must allow for the University's excused absences listed below. Enforcement of such attendance policies lies with those instructors. If the instructor thinks a student has too many absences (total of excused and unexcused), then the instructor should discuss the student's attendance with the appropriate Assistant or Associate Dean of the instructor's college in order to determine if the student should withdraw or receive an incomplete.

Where possible, students should inform their instructors if they plan to be late or absent from class. In all cases, students should be prepared to provide documentation to petition for excused absences to the appropriate Assistant or

Associate Dean of their college. Excused absences do not count toward a failure in the course for first year students. Absence from class does not release the student from work assigned. Students who miss an in-class obligation (exam, presentation, etc.) due to an excused absence will not be penalized – the instructor may offer a make-up test, arrange an alternative time for a presentation, exempt a student from the assignment, or provide another arrangement.

The University’s list of excused absences for all students includes the following:

- participation in NCAA athletic competitions
- participation in special academic events (e.g., conferences, field trips, project competitions)
- participation in official university business (e.g., student representatives attending meetings related to university governance)
- attendance at significant events involving the immediate family (e.g., funerals, weddings)
- religious holidays - see the University’s policy on Religious Holidays
- college-approved participation in placement activities (e.g., job interviews, graduate school interviews, attending job fairs)
- legally required absence (jury duty, court appearance, short-term military service)
- documented serious illness or disability (see below how to document)

If instructors want to verify that the absence qualifies as an excused absence under the university list or verify that the student is permitted to participate in the activity, they should contact the designated Assistant or Associate Dean of the student’s College.

The College of Professional Studies has separate attendance policies for FastForward courses and degree programs. The College of Nursing has a separate attendance policy for the online RN to BSN program. Graduate Studies in the College of Liberal Arts and Sciences has separate attendance policies for online degree programs.

Documenting a Serious Illness or Disability. The Student Health Center does not provide notes to excuse absences for students missing class due to their visit to the Student Health Center, or to excuse class absences due to most common illnesses. The Student Health Center will also not provide notes to excuse absences for medical conditions that were not treated at the Student Health Center. The purpose of this policy is to eliminate unnecessary visits from students whose sole purpose is obtaining class absence notes for their professors.

Some illnesses may legitimately prevent a student from attending classes, but are not serious enough to require evaluation and treatment from the Student

Health Center. Students often provide self-care, which is very appropriate for many common illnesses such as cold, viral infection, or uncomplicated flu. Students should inform their instructors if they are missing class for a common illness. Instructors have the discretion to decide if the absence due to a common illness is excused. If a student wishes to appeal the instructor's decision, the student may do so by contacting the instructor's Department Chair or Program Director, who will consult with the appropriate Assistant or Associate Dean of the instructor's college, before deciding the outcome of the appeal. If in the judgment of the Student Health Center staff, the student will be out of class due to a serious illness or medical condition, as opposed to a common illness, the Student Health Center staff will contact the appropriate Assistant or Associate Dean, who will then contact the instructor. The Student Health Center communication to the Assistant or Associate Dean will serve as the documentation needed by the Dean (see below). If the student is seeing an off-campus health care provider, the student will provide the documentation from that provider to the appropriate Assistant or Associate Dean, who will then contact the faculty member.

Examples of serious illnesses may include (but are not limited to):

Mononucleosis, which may require bed rest and/or removal from campus
Hospitalization and/or surgery
Highly contagious diseases (e.g., chicken pox, measles)

Mental Health Concerns. The University Counseling Center will use clinical judgment as to whether there is a legitimate need for the student to miss class for reasons related to mental health. If in the judgment of the University Counseling Center staff, the student should be out of class due to a mental health condition, the Counseling Center staff will request a written release of information from the student. With a signed release, the Counseling Center staff may then contact the faculty member or the appropriate Assistant or Associate Dean, who may contact faculty accordingly. The University Counseling Center will not typically validate the legitimacy of a student having missed classes for mental health reasons retroactively before the student has been to the Counseling Center. The fact that a student is in treatment at the Counseling Center or with an off campus mental health provider will not, in itself, justify the student missing classes. The recommendation for missing classes will occur only when the mental condition necessitates it. If the student is seeing an off-campus mental health care provider, the student will provide the documentation from that provider to the appropriate Assistant or Associate Dean, who will then contact the faculty member. If the duration of the absence due to serious medical illness or mental health concern undermines the student's ability to complete the academic work required, the appropriate Assistant or Associate Dean will encourage the student to pursue a Medical Leave of Absence (see policy on *Medical Leaves of Absence*.)

Documenting Disabilities. Students who are registered with Learning Support

Services (LSS) or the Office of Disability Services (ODS) must provide accommodation letters from those offices to their instructors (in advance of absences) in order for subsequent disability-related absences to be considered excused. Students who are newly struggling should be encouraged to register with the appropriate office for any future concerns. Accommodations are not typically retroactive.

Students with learning disabilities, other neurologically-based disorders, and those disabled by chronic illnesses are encouraged to contact [Learning Support Services](#) (LSS). Students with physical disabilities, including but not limited to visual impairments, hearing loss, and mobility limitations, are encouraged to contact the [Office of Disability Services](#) (ODS). Depending on the type of disability there are different processes for disclosing and documenting the disability with the University.

For students with learning disabilities, neurologically-based disorders, and disability due to chronic illness, these guidelines, as well as certification forms for certain specific disabilities, can be found [here](#).

For students with physical disabilities, these guidelines can be found [here](#).

Course Numbering. Courses of instruction are numbered according to the following system: courses designated 1000-6999 are given for undergraduate students only; courses numbered 7000-7999 are graduate courses ordinarily open to qualified undergraduates; courses numbered 8000-9999 are graduate courses not ordinarily open to undergraduates.

If a qualified senior wishes to enroll in a graduate course, written approval must be obtained from the student's adviser and undergraduate college Dean. The College of Liberal Arts and Sciences requires, in addition, approval of the instructor and departmental chairperson of the course involved, and the Graduate Dean of Arts and Sciences.

Credit Hour Policy. Except as otherwise described in the "Specific Guidelines" below, all credit courses offered by the College of Engineering, College of Liberal Arts and Sciences, College of Nursing, College of Professional Studies, and School of Business are normally expected to meet for 50 minutes per credit hour per week during a fifteen-week semester; courses scheduled in shorter sessions (e.g. Summer Sessions; Fast Forward; Graduate Business; Online programs, etc.) must meet for an equal amount of time over the shorter period. The Villanova School of Law has its own credit hour policy; however, courses offered by College of Engineering, College of Liberal Arts and Sciences, College of Nursing, College of Professional Studies, and School of Business as part of programs offered in partnership with the Villanova School of Law will comply with the University's Credit Hour Policy. Consistent with the policies of the federal government and the Middle States Commission on Higher Education, credit courses are normally expected to include approximately two hours of out-of-class student work (or the reasonable equivalent) per credit hour per week during a fifteen-week

semester; with reasonably equivalent amounts of out-of-class work for shorter sessions.

Exceptions to the credit hour requirements in this Policy will be allowed for academic activities that require reasonably equivalent work and are important to learning and teaching goals. Such exceptions to the credit hour requirements in this Policy must be approved by the Dean of the college or school and the Provost. Class schedules must be approved and developed in accordance with the following specific guidelines.

Specific Guidelines. A minimum of two hours of science lab or clinical practice per week in a fifteen- week semester generally counts for one credit.

Three-credit graduate courses and Senior Seminars normally will be expected to meet a minimum of 120 minutes per week rather than 150, because of the higher expectations for work outside of class time

Courses offered entirely online and courses with online components may use viewing video lectures and participation in blogging, discussion boards, etc. that are relevant to the learning and teaching goals of the course to count as part of class time.

Course meetings that are conducted as non-science labs, oral presentations, studio sessions, rehearsals or other course-based activities will generally be granted one credit for a minimum of 50 minutes of meeting time per week (or the cumulative equivalent over a semester) as long as they are central to the course's learning and teaching goals in the syllabus.

Exceptions to the class time requirements in this Policy will be allowed only when: (i) the course requires academic activity outside class meetings sufficiently in excess of the normal expectation (two hours per credit hour per week) to compensate for the reduced time in class; and (ii) the rationale for the exception is manifest in the course syllabus and clearly shown to be materially relevant to the course's learning goals. Such courses will typically be either research-intensive (where students are undertaking an independent course of research over and above assigned reading) or have an experiential, clinical or service learning component or be an approved independent study; in any case, such courses will depend on close monitoring by the instructor of the nature, quality, and quantity of the work done outside scheduled classroom hours. A syllabus for each course should contain a clear description of class meeting times and any approved or required non-classroom activities.

Discipline and Academic Integrity. Academic honesty and integrity lies at the heart of the values expressed in the University's mission statement and inspired by the spirit of Saint Augustine. When one comes to Villanova, one joins an academic community founded on the search for knowledge in an atmosphere of cooperation and trust. The intellectual health of the community depends on this

trust and draws nourishment from the integrity and mutual respect of each of its members.

Villanova University has a formal code of academic integrity (<https://www1.villanova.edu/villanova/provost/resources/student/policies/integrity/integritypolicy.html>), which discusses issues such as plagiarism and other unacceptable academic behaviors. This document is included in *The Blue Book: Villanova University Student Handbook*, which is distributed to all students. It is the responsibility of every student to be familiar with this code and to adhere to it.

Students who receive an academic integrity penalty may, if they believe that they have not committed an academic integrity violation, take their case to the Board of Academic Integrity. Detailed descriptions of the University's Academic Integrity Policy are available from department chairs, deans, and the Provost's web site.

In keeping with its nature and goals as a private, church-related institution, Villanova University regards student life on campus as an integral part of the student's educational experience. Hence it is to be understood that the student, in joining the University community, accepts the regulations promulgated in the Student Handbook. The student should also become acquainted with and understand the responsibilities set forth in the Student Handbook, especially those in the sections on Policy and Regulations. Adherence to University regulations is expected and required for successful completion of the program of studies. Enforcement within the classroom of regulations regarding smoking, proper classroom attire, deportment, etc., is the responsibility of the faculty member. All other discipline problems are to be referred to the Dean of Students.

Student Records Policy. Villanova University, in accordance with the Family Educational Rights and Privacy Act (FERPA) of 1974, as amended, has adopted this Student Records Policy to address the following issues with respect to education records: (1) disclosure of directory information; (2) confidentiality of personally identifiable information; and (3) student rights to inspect, review and seek amendment of their records. In general, education records are defined as records maintained in any form by the University that are directly related to a student.

Disclosure of Directory Information. Information concerning the following items about individual students is designated by the University as directory information and may be released or published without the student's consent: full name; student identification number; address (local, home or electronic mail); telephone number; photograph or video; date and place of birth; major field of study; grade level; enrollment status (e.g., undergraduate or graduate, full-time or part-time); dates of attendance; degrees, honors and awards received (including Dean's List); most recent previous educational institution

attended; participation in officially recognized University activities and athletics; and weight and height of members of athletic teams. Students who do not wish directory information to be released or made public must inform in writing the Office of the Registrar.

Confidentiality of Personally Identifiable Information. All personally identifiable information contained in student records other than directory information is considered confidential information. This information includes but is not necessarily limited to: academic evaluations; general counseling and advising records; disciplinary records; financial aid records; letters of recommendation; medical or health records; clinical counseling and psychiatric records; transcripts, test scores, and other academic records; and cooperative work records. "Personally identifiable information" means that the information includes: (a) the name of the student; (b) the address of the student; (c) a personal identifier such as social security number; or (d) a list of personal characteristics or other information that would make the student's identity easily traceable.

The University will generally not disclose personally identifiable information to third parties without the written consent of the student. The signed and dated consent should specify the records to be disclosed, the purpose of the disclosure, and to whom the records are to be disclosed. However, personally identifiable information may be disclosed, without the student's consent, to the following individuals or institutions, in accordance with FERPA, including in the following circumstances:

- a. To University officials (or office personnel ancillary to the officials) who require access for legitimate educational purposes such as academic, disciplinary, health or safety matters. University officials may include, without limitation, the Board of Trustees, the President, Vice Presidents, Deans, Directors, Department Chairs, Faculty Members, ROTC Commanding Officer, attorneys in the Office of the Vice President and General Counsel, Judicial Officers, Counselors, Resident Advisers, Coaches and Admissions Officers. University officials also include contractors, consultants, volunteers and other outside parties, such as an attorney or auditor providing services on behalf of the University for which the University would otherwise use employees.
- b. To the party(ies) who provided or created the record(s) containing the personally identifiable information.
- c. To officials of other educational institutions to which the student seeks or intends to enroll or where the student is already enrolled, for purposes related to the student's enrollment or transfer (on condition that the student upon request is entitled to a copy of such records).
- d. To appropriate federal, state or local officials or authorities, consistent with federal regulations.
- e. To the U.S. Attorney General (or designee) pursuant to an ex parte order under

- the U.S. Patriot Act in connection with certain investigations or prosecutions.
- f. To organizations conducting studies for, or on behalf of, educational agencies or institutions.
 - g. To accrediting organizations to carry out their accrediting functions.
 - h. To parents of a dependent student as defined in Section 152 of the Internal Revenue Code of 1986.
 - i. To parents of a student under the age of 21, where the information pertains to violations of any federal, state or local law or of any University rule or policy governing the use or possession of alcohol or a controlled substance, and the student has committed a disciplinary violation.
 - j. In connection with the student's application for, or receipt of financial aid.
 - k. To comply with a judicial order or lawfully issued subpoena (on condition that a reasonable effort is made to notify the student of the order or subpoena, if legally permitted to do so).
 - l. In case of an emergency, to appropriate parties, including parents, to protect the health or safety of the student or other individuals, where the University determines that there is an articulable and significant threat to the student or other individuals.
 - m. The disclosure of information concerning registered sex offenders provided under state sex offender registration and campus community notification programs.
 - n. The outcome of a disciplinary proceeding to a victim of or alleged perpetrator of a crime of violence or non-forcible re-offense.
 - o. The outcome of a disciplinary proceeding where a student is an alleged perpetrator of a crime of violence or non-forcible sex offense and is determined to have violated the University's rules or policies.

If required under FERPA, the University will inform a party to whom a disclosure of personally identifiable information is made that it is made only on the condition that such party will not disclose the information to any other party without the prior written consent of the student.

Non-Education Records. The following are not considered education records, and thus are not protected by FERPA and this policy:

- Employment records of students as University employees.
- Campus law enforcement records created and maintained by the Public Safety Office, in accordance with the requirements of FERPA.

Records that are made or maintained by a physician, psychiatrist, psychologist, or other recognized professional or paraprofessional acting in his or her professional capacity or assisting in his or her paraprofessional capacity, and that are made, maintained, or used only in connection with treatment of the student and are disclosed only to individuals providing the treatment. These records may be reviewed, however, by a physician or other appropriate professional of the student's choice.

Records of instructional, supervisory, and administrative personnel and educational personnel ancillary to those persons, that are in the sole possession of the maker of the record and are not accessible or revealed to any other individual except a temporary substitute for the maker.

Records that only contain information about a person after that person was no longer a student at the University and that are not directly related to the individual's attendance as a student (e.g., information collected by the University pertaining to accomplishments of its alumni).

Grades on peer graded papers before they are collected and recorded by a faculty member.

Inspection and Review Rights; Right to a Hearing: A currently or previously enrolled student has the right to inspect and review his or her educational records. This right does not extend to applicants, those denied admission, or those admitted who do not enroll. Offices may require that requests for access be submitted in writing, and may ask for, but not require, the reason for the request. The University will comply with requests to inspect and review a student's records that it has determined to honor within a reasonable period of time, but in no case more than forty-five days after the request was made. Records to which students are not entitled to access include:

Confidential letters and statements of recommendation placed in a student's record before January 1, 1975, or confidential letters and statements of recommendation to which students have waived their rights of access.*

Financial records of the parents of the student or any information contained in those records.

Those portions of a student's records that contain information on other students.

Those records listed in Section III above.

A student who believes that any information contained in his or her educational records is inaccurate or misleading, or otherwise in violation of his or her privacy rights, may request that the University amend the records. The student should first discuss his or her concerns with the individual responsible for the office where the records are maintained. If the student is not satisfied with the resolution, the student should contact the individual to whom that person reports. If still not satisfied, the student may contact the appropriate vice president or designee. The final level of appeal is a formal hearing. To obtain a hearing, the student should file a written request with the Vice President for Student Life. The hearing will be conducted in accordance with the requirements of FERPA.

The substantive judgment of a faculty member about a student's work (grades or other evaluations of work assigned) is not within the scope of a FERPA hearing. A student may challenge the factual and objective elements of the content of student

records, but not the qualitative and subjective elements of grading.

If as a result of a hearing the University determines that a student's challenge is without merit, the student will have the right, and will be so informed, to place in his or her records a statement setting forth any reasons for disagreeing with the University's decision.

Students have a right to file complaints concerning alleged failures by the University to comply with the requirements of FERPA and the implementing regulations. Complaints should be addressed to the Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue, S.W., Washington, DC 20202-5901. Students are encouraged to bring any complaints regarding the implementation of this policy to the attention of the Vice President and General Counsel.

*Students may be invited but not required to waive their right of access to confidential letters of recommendation for admission, honors or awards, or employment. Failure to execute a waiver will not affect a student's admission, receipt of financial aid, or other University services. If a student signs a waiver, he/she may request a list of all persons making confidential recommendations.

Final Examinations and Final Week of Classes. Faculty members recognize their obligation to provide timely interim and final assessments of student performance in their classes. This may be done in a variety of ways, to be determined by each instructor. The assessment methodology should be spelled out clearly in the syllabus, with an explanation of the relative weight each item will contribute to the final grade.

The Registrar schedules a time for a final examination for each course. These times are available on the Registrar's website: <https://www1.villanova.edu/villanova/enroll/registrar.html> early in the semester, so students should have adequate time to make travel plans. It is permissible to omit the final examination, provided that other equivalently comprehensive assessment techniques are employed. If final examinations are given, they must be given at the time and place scheduled by the Registrar unless exemption has been authorized by the chair and dean.

In order to balance student workload during the final week of classes, the following describes prohibited times for administering examinations or other assessment instruments in undergraduate courses only.

Reading days: No exams or assessment instruments whatsoever may be administered, and no papers or other assignments may be due, on designated reading days.

Final day of class: With the exception of oral presentations or laboratory

assessments, no exams or other student performance assessment instruments whatsoever may be administered, and no papers or other assignments may be due, on the final day of class. Faculty may administer the Course and Teacher Survey.

Other days of the final week of classes: No final examinations may be administered, and no take-home exams may be due, during the final week of classes. Other major examinations and tests may be administered only with the explicit written consent of the dean of the college (quizzes and minor assignments are permitted). No paper or other assignment may be due on other days of the final week of classes unless clearly scheduled for that week in the course syllabus that is distributed at the outset of the course.

The below section refers to both graduate and undergraduate courses:

*Tests or student learning assessment mechanisms are to be employed periodically. In the interest of fairness, faculty members should take steps to avoid situations where some students have access to previous examinations while others do not. This can be done in several ways: faculty members may collect examination papers from students so that these cannot be circulated in later semesters, or faculty members may make previous examinations available to students either electronically or by other means. Copies of semester examinations are to be filed with the chair of the department and/or the dean of the college.

*Occasionally students will encounter conflicts in the examination schedule such that two of a student's examinations are scheduled at the same time or three examinations are scheduled on the same day. In the event of such a conflict, the student must notify the instructor at least seven days in advance of the scheduled exam. The instructor will make alternative arrangements for the student to complete the examination. In resolving conflicts, multiple section exams should take precedence over exams for a single section, and courses in the major should take precedence over non-major courses. Extraordinary difficulties encountered in effecting such an arrangement will be resolved by the dean of the student's college.

*If a student is absent from a final examination for any reason other than a conflict, he or she must contact the instructor within 24 hours of the scheduled beginning of the examination to request permission from the instructor to take a make-up examination. The instructor may, if he or she wishes, arrange a make-up examination at a mutually convenient time. If the faculty member has reservations about the legitimacy of the student's reasons for missing the examination, the faculty member may refer the student to the office of the college dean, who will evaluate the student's request for a make-up. If the office of the dean approves the request, the faculty member will arrange a make-up examination for the student or assign other work in place of the final examination. If the student does not contact the faculty member within 24 hours,

the student must receive permission from both the office of the dean and the faculty member before being allowed to take a make-up examination.

*Faculty members should attend the administration of the final examination in order to answer any questions and ensure high standards of academic integrity. When they are unable to do so, department chairs are to see that sufficient proctors are provided for each examination room. Where there is a shortage in any department, assistance should be requested from other departments.

*Faculty members must retain in their possession all final exams and other unclaimed exams, papers, and student course projects and materials for a period of twelve months following the end of the semester in which they were used to establish grades.

Grading System. At mid-semester and at the end of the semester grades are available to the student from the “Just For You” tab in the student’s myNova account. The grade report at the end of the semester is part of the student’s permanent record and transcript. Any inaccuracy on this record must be reported to the Registrar according to the following deadlines; otherwise, the record will stand as it is.

Spring Semester grade errors: Last Friday in June Summer Semester grade errors: Last Friday in August Fall Semester grade errors: Last Friday in January

Grade Definitions

A The highest academic grade possible; an honor grade which is not automatically given to a student who ranks highest in the course, but is reserved for accomplishment that is truly distinctive and demonstrably outstanding. It represents a superior mastery of course material and is a grade that demands a very high degree of understanding as well as originality or creativity as appropriate to the nature of the course. The grade indicates that the student works independently with unusual effectiveness and often takes the initiative in seeking new knowledge outside the formal confines of the course.

A-

B+

B Denotes achievement considerably above acceptable standards. Good mastery of course material is evident and student performance demonstrates a high degree of originality, creativity, or both. The grade indicates that the student works well independently and often demonstrates initiative. Analysis, synthesis, and critical expression, oral or written, are considerably above average.

B-

C+

C Indicates a satisfactory degree of attainment and is the acceptable standard for graduation from college. It is the grade that may be expected of a student of average ability who gives to the work a reasonable amount of time and effort. This grade implies familiarity with the content of the course and acceptable mastery of course material; it implies that the student displays some evidence of originality and/or creativity, works independently at an acceptable level and completes all requirements in the course.

C-

D+

D Denotes a limited understanding of the subject matter, meeting only the minimum requirements for passing the course. It signifies work which in quality and/or quantity falls below the average acceptable standard for the course. Performance is deficient in analysis, synthesis, and critical expression; there is little evidence of originality, creativity, or both.

D-

F Indicates inadequate or unsatisfactory attainment, serious deficiency in understanding of course material, and/or failure to complete requirements of the course.

N Incomplete: course work not completed.

S Satisfactory: Assigned in Satisfactory/Unsatisfactory courses (work must be equivalent to C or better).

SP Satisfactory Progress.

T Transfer grade.

WX Approved withdrawal without penalty.

W Approved withdrawal with penalty.

U Unsatisfactory: Assigned in Satisfactory/Unsatisfactory courses

AU Audit.

Y Unofficial withdrawal from course (or for freshmen, failure for excessive absences).

NG (Or Blank): no grade reported.

OC - Indication of Off-Campus Enrollment, effective Fall 2012

All grades are permanent, except N and NG, which are temporary grades used to indicate that the student's work in a course has not been completed. An N or NG grade must be removed and a grade substituted by the instructor according to the following schedule:

For the Fall Semester: Students must submit all work to the instructor by the last Friday in January; grade changes must be submitted to the Registrar's Office by the second Friday in February

For the Spring Semester: Students must submit all work to the instructor by the last Friday in June; grade changes must be submitted to the Registrar's Office by the second Friday in July

Students should check the academic calendar for actual dates. NOTE: if a change is not reported, the N or NG grade reverts to an NF.

Without the approval of the instructor, the department chairperson, and the Dean, no grade higher than C may replace the N.

The grade WX indicates an authorized withdrawal with the grade not considered in the calculation of the quality-point average. The grade W also indicates an authorized withdrawal, but the grade is calculated as an F in determining the quality-point average. Authorization for WX and W may be given only by the student's Dean. The grade Y is given when a student unofficially withdraws from a course. It is reflected in the average as an F.

Required courses carrying a final grade of F must be repeated unless the student transfers to another college of the University where the course for which an F grade was received is not a requirement for the degree. When a student who has failed in a course presents evidence of subsequently passing a like course in another institution, the University reserves the right to withhold credit for the course until the student shall have passed a qualifying examination given by the Faculty from which a degree is sought.

Students should recognize that failure in one course or more will usually make it impossible for them to graduate with the class in which they matriculated.

Audit. Courses may be audited with an adviser's consent. The student who has been granted audit status will not be responsible for the assignments and examinations required in the course but must attend all class and laboratory sessions. Although no credit or grade is received, the same tuition and fees are charged for an audit as for a credit course. A student must declare audit status by completing the appropriate form in the Registrar's Office by the end of the drop/add period, and no change from credit to audit status or vice versa may be made after that period.

A class taken for audit may subsequently be taken for credit, but the student will be charged normal tuition and fees for the course.

Satisfactory/Unsatisfactory Option. For the regulations governing students eligible for the satisfactory/unsatisfactory option in the different colleges and the courses that may be required, see the appropriate section of the catalog in which the college degree programs are listed. The following regulations apply to all colleges:

The satisfactory/unsatisfactory grade will be shown on the transcript but will not be reflected in the quality-point average.
The grade S is the grade C or better.

A student must declare election of the satisfactory/unsatisfactory option by the end of the drop/add period.

Incomplete or In-Progress Grades and Graduation. In the case where a student has an incomplete (N) or in progress (IP) grade for a course that is not required for degree completion in the graduation term the college who is conferring the degree must validate that the degree requirements are met without the completion of that course. Proof of completion of degree requirements should be sent to the Office of the Registrar. In addition to the completion of the courses required for graduation, the college must confirm that the student's overall GPA is at minimum a 2.0 (3.0 for graduate programs) using the grade of "F" in the incomplete/in progress non- required course in the GPA calculation. This GPA must be confirmed because all courses count towards a student's GPA which must be a minimum of 2.0 (3.0 for graduate programs) to graduate. In addition, undergraduate students in the VSB, Engineering, Nursing and the Sciences must attain a 2.0 technical GPA in order to graduate.

In the case where a student completes requirements for one degree/major, but has incomplete or in progress grades in the graduation term that impact the completion of another major, minor, or concentration, that major, minor or concentration will be added to the degree record only when the work has been completed and the college notifies the Office of the Registrar that the new requirements have been met. If the requirements have been met by the diploma date (May 31, September 1, or December 31), the additional major/minor/concentration will be posted to the same graduation term record. If the course work is completed after the dates noted above, the additional major/minor/concentration will be added to the student's record with a notation that those requirements were completed in the appropriate subsequent term.

The Office of the Registrar reserves the right to withhold the computation of graduation honors (summa cum laude, magna cum laude, cum laude) for any undergraduate student with incomplete or in progress grades- regardless of whether or not the course is needed for graduation- since the *overall* final GPA for all coursework is what determines honors designation. If the grade in the course affects honors, the Office of the Registrar may not post honors to the student record until the incomplete or in progress grade is converted to a final grade. Since graduate students do not receive honors at graduation this policy is not applicable to them.

Official Date of Graduation. The Academic Calendar for each year shall indicate the official graduation dates for the University. (These dates should not be confused with the dates for the annual commencement exercises). The deans shall send the registrar a list of all students in their college or school who have satisfactorily completed by the official date all the requirements for graduation. The registrar shall issue diplomas only to those students whose names appear

on the list.

The current graduation dates are May 31, September 1, and December 31. Students certified after any of those dates will graduate officially at the next commencement.

Residence Requirement for Graduation. Normally, a student must complete the final 30 credit hours of an academic program at Villanova. Exceptions may be made by the College Dean.

Scholastic Load. A student must take a minimum of 12 credits a semester to be a full-time student. Permission to take fewer than 12 credit hours may be obtained in exceptional circumstances with the written approval of the Dean. A normal scholastic load is defined by the program set forth in this catalog. In the Villanova School of Business and the College of Liberal Arts & Sciences, students with a G.P.A. over 3.0 may sign up for an overload with registration for the sixth course possible only after the main registration period is over. No special approval would be needed.

Policy on Undergraduates Enrolling in Graduate Courses. Undergraduates may take graduate courses, provided they meet the standards set down by each college: e.g., senior standing (in terms of credits, not in terms of years at Villanova), grade point average, and appropriate permissions (advisor, dean, chair, course instructor). The College of Nursing may exempt certain students from the “senior standing” requirement for a limited number of courses that juniors may take. Colleges are urged to compile a list of graduate courses that may and may not be taken, and this list should be available to students upon request. Colleges will ensure that proper advising is provided to undergraduate students with respect to taking graduate courses.

Undergraduates may take a maximum of two graduate courses in any semester. If an undergraduate takes a graduate class, in that semester s/he is limited to taking a maximum of 16 credit-hours of work. The deans of the individual college approval procedures may impose more restrictive limits if that is deemed necessary. In the Colleges of Nursing and Engineering, because of scheduling needs, students may, with permission, slightly exceed the 16-hour limit.

If allowed by the graduate program, up to nine hours or nine credits of graduate courses taken by undergraduates may double count – both for the bachelor’s degree and for the master’s degree, whether or not a student is formally enrolled in a five year bachelor’s- master’s program. If an undergraduate student completes additional graduate courses beyond the three, the additional course(s) will count toward the undergraduate degree and be included in the student’s undergraduate record unless the Graduate Dean in CLAS, or the appropriate Associate Dean responsible for graduate programs in the other colleges, approves the additional course(s) counting toward the graduate degree

only.

All graduate courses taken by an undergraduate student will appear and remain on the undergraduate transcript and will be calculated in the undergraduate GPA. When additional graduate courses beyond the three that will double count are taken, and if the additional graduate courses are allowed to count toward a subsequent graduate degree, then the undergraduate college will need to manage the student's undergraduate degree audit so that the additional graduate course(s) is/are excluded from fulfilling undergraduate degree requirements. If/when a student becomes a graduate student, and graduate courses taken as an undergraduate student apply to that program, the Graduate Dean in CLAS, or the appropriate Associate Dean responsible for graduate programs in the other colleges, will notify the Registrar's Office of all graduate courses to be applied to graduate degree requirements, so record adjustments can be made.

Transfer of Credit from another University. Once a student has matriculated in a degree program at Villanova University, credit for courses from other universities may only be transferred to Villanova under certain circumstances. With the approval of the Dean of the student's college or his/her designee, students who are matriculated at Villanova and new transfer students either from other four-year institutions or from two-year institutions may seek to transfer credits from two year institutions.

International Studies. Courses taken in colleges and universities in other countries will be transferred for credit, assuming that they are approved by Villanova's Office of Education Abroad and the Dean of the student's college or his/her designee.

Summer courses. No summer course may be taken at another institution, domestic or foreign, for transfer of credit back to Villanova without pre-approval by the Dean of the student's college or his/her designee.

Villanova normally does not approve transfer of credits for courses taken during the summer at other colleges and universities if the same or comparable (for purposes of filling requirements) courses are available at Villanova in a distance education mode during the summer.

Leave of Absence. Normally, Villanova will not pre-approve courses, or transfer credits back to Villanova, for students who will be on a University leave of absence when they enroll in such courses.

Withdrawals and dismissals. Students who have withdrawn from the University or who are dismissed from the University for academic reasons frequently continue their academic work at other colleges and universities. Villanova does not pre-approve courses to be taken at another University after a student has been dismissed or has withdrawn. If these students apply for readmission to the

University, courses taken at other colleges and universities will be evaluated for transfer credit by the Dean of the college to which the student is seeking readmission. Acceptance of any such credits is at the sole discretion of the Dean.

3. Suspension. Normally, Villanova will not pre-approve courses, or transfer credits back to Villanova, for students who have been suspended for violations of the Student Code of Conduct when they enroll in such courses.

Withdrawal from a Course. Until the final day for authorized withdrawal from courses, (for an exact date, see the [academic calendar](#)), a student may withdraw from a course without penalty and will receive the grade of "WX." After that date, a student seeking authorized withdrawal without penalty must petition the Dean of his or her college, who has sole authority to grant withdrawals without penalty. Each college has different requirements, which may be found in each college's section of the University Catalog. Note that withdrawals without permission will receive a "W" grade, which is calculated as an "F" in computing one's quality point average.

Withdrawal from the University; Leave of Absence. Students occasionally leave the University either on a temporary or on a full time basis; the following policies apply:

Leave of absence. Full-Time undergraduate students who plan to leave the University on a temporary basis should request a Leave of Absence. Official leave of absence from the University must be authorized by the Dean of the appropriate college. In order to affect a leave of absence, a student must submit to the Dean a formal letter, or the appropriate college form, and should then have an interview with the Dean. The request for a leave of absence may be countersigned by the student's parents or legal guardian. The parents or guardians may, if they wish and if authorized by the student, submit the official request for a leave of absence. In consultation with the student, the parents, and other campus offices as applicable, the Dean will determine what issues should be addressed during the period of the leave. Leave of absence should normally be for no more than a year. When the student feels that he or she is ready to return to the University, the student should request an interview (which may be by telephone) with the college Dean. To guarantee the student's success, the Dean will determine whether the issues that occasioned the request for leave have been addressed. Assuming that the issues have been resolved, the student will then be returned to active status. If the student does not return to the University within the time originally requested (normally no longer than a year), the student will be considered as having withdrawn from the University.

Voluntary Medical Leave of Absence (MLOA). A student may experience physical or psychological conditions that significantly impair the student's ability to function successfully or safely in his or her role as a student. In such cases, the student may decide that time away from the University for treatment and recovery can help restore functioning to a level that will enable the student to return to the

University and perform successfully in and out of the classroom. The University has an interest in students receiving appropriate care not only for their own well-being, but also for the wellbeing of the larger community with whom the student interacts. When a student initiates a MLOA, Villanova University may establish criteria regarding the student's eligibility for returning to the campus community. The criteria include, but are not limited to, compelling evidence that the condition that precipitated the need for the MLOA has been sufficiently treated or ameliorated to the point where it will no longer adversely affect the student's or the community's safety or functioning.

Criteria for Approval of a MLOA. Three steps are required for approval of a MLOA.

1. The student must schedule an appointment with the Student HealthCenter or the University Counseling Center for a MLOA evaluation.
2. The student must schedule an appointment with the Dean of Students or appropriate academic Dean in the student's college to discuss and review the MLOA request.
3. The student must complete the MLOA Request Form and submit one copy to the Dean of Students or the appropriate academic Dean.

The MLOA request may be made at any time during the semester, but must be completed no later than the last day of classes in a semester, including the requisite evaluation and any related paperwork for the Dean's office. Requests not completed by the last day of classes will be considered late requests and will be considered for the following semester barring exceptional circumstances.

The Dean of Students or the academic Dean's office will make the final determination whether the MLOA will be granted, in consultation with University's health professionals. The Dean's office granting the leave will specify the terms of the MLOA including conditions for return to the University following the leave. At a minimum, a MLOA will be for one semester and, depending on the timing of the request and the nature of the circumstances, the MLOA may involve additional semesters to allow sufficient time for full recovery, a sustained period of stability, and to increase the student's opportunity for success upon his/her return to the University. When the student seeks to return to the University, the Dean's office granting the leave will determine whether the student has satisfied the conditions and is permitted to return.

Withdrawal from the University. Students who wish to leave and who do not plan to return to the University should request a Withdrawal. Official withdrawal from the University must be authorized by the Dean of the appropriate college. In order to affect an official withdrawal, a student must submit to the Dean a formal letter, or the appropriate college form, and then

have an interview with the Dean. The letter of withdrawal may be countersigned by the student's parents or legal guardian. The parents or guardians may, if they wish and if authorized by the student, submit the official letter of withdrawal. Students who request an official withdrawal during the semester may be eligible for refund of some or all of the tuition paid for that semester (see policy above on Refunds). A student who has withdrawn from the University who wishes to return, must apply directly to the college the student wishes to attend (admission is granted at the sole discretion of the dean of that college).

Unauthorized withdrawal. Students who leave the University without authorization will be treated as having withdrawn from the University. They may not return to the University without reapplying directly to one of Villanova's colleges.

College of Liberal Arts and Sciences

Adele Lindenmeyr, Ph.D., Dean

Emory Woodard, Ph.D., Dean, Graduate Studies

Crystal J. Lucky, Ph.D., Assoc. Dean for Baccalaureate Studies

Barry Selinsky, Ph.D., Assoc. Dean for Research and Faculty Development

Joseph Lennon, Ph.D., Assoc. Dean for International & Interdisciplinary Studies

Edward Fierros, Ph.D., Assoc. Dean for Diversity and Inclusion

Rebecca Rebalsky, Assist. Dean for External and College Relations

Susan Jacobs, M.A., Assist. Dean for Undergraduate Students

Seth Matthew Fishman, Ph.D., Director of Curriculum and Assessment

Office: 105 Saint Augustine Center for the Liberal Arts Phone: 610-519-4600

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Set love as the criterion of all that you say, and whatever you teach, teach in such a way that the person to whom you speak, by hearing, may believe, by believing hope, and by hoping love.

THE INSTRUCTION OF BEGINNERS - St. Augustine

History. The College of Liberal Arts and Sciences of Villanova University was founded by the Augustinian Order in 1842. The College traces its origins to old St. Augustine's Church in Philadelphia, which the Augustinians founded in 1796, and to its parish school, St. Augustine's Academy, established in 1811.

In 1842 the Augustinians purchased "Belle Air," the country estate of John Rudolph, a Revolutionary War officer and Philadelphia merchant. There they established the "Augustinian College of Villanova," under the patronage of St. Thomas of Villanova, a 16th century Augustinian educator and Bishop of Valencia, Spain. Eventually the College came to be known as Villanova and gave its name to the town which grew up around it.

Classes for the new college began on September 18, 1843, when 13 students embarked on a traditional liberal arts curriculum. At the outset, however, difficulties plagued the new college. The anti-Catholic "Know Nothing" riots in Philadelphia in 1844 resulted in the burning of St. Augustine's Church. The need to rebuild the church and maintain the new college created a financial crisis for the Order. As a result, the College closed its doors on February 20, 1845. It was able to reopen in September, 1846, with a student population of 24; the first commencement took place on July 21, 1847. The following year, on March 10, 1848, the Governor of Pennsylvania, Francis R. Shunk, signed the Act of Legislature incorporating the College.

In 1857, Villanova College closed for a second time. Demands on the services of priests through the expansion of parishes in the area created staffing problems for the Augustinians, while the “Panic of 1857” brought on hard economic times. The onslaught of the Civil War in 1860 affected student enrollment, and the College was not reopened until September 1865.

In the years that followed, the College prospered, increasing its student population and adding significantly to its physical facilities. Although in the first 50 years of its existence the College concentrated exclusively on the liberal arts, it nevertheless remained open to the changes in curriculum which were required to meet the needs of the time and the demands for specialization.

Today, the College continues to offer a variety of educational programs that are aimed at the total growth of the individual and which prepare students for viable careers. Graduates of the College have taken their place in almost every field of endeavor, serving in education, business, government, law, medicine, and research, where they make vital contributions to the communities and the world in which they live.

Academic Mission. The College of Liberal Arts and Sciences exists to provide an atmosphere of responsible learning to a varied group of students who are called to intellectual, moral, and professional leadership. To fulfill these goals, the College seeks to promote intellectual curiosity and rigor within the university; to instill the fundamentals of critical insight, mature judgment, and independent thinking; and to awaken in its students a sense of the importance of values and the moral responsibility of caring for others and working for the betterment of society.

Villanova has always openly and proudly declared that it is a Catholic institution of higher learning. The University maintains a strong respect for the beliefs of its diverse community of faculty, students, and staff. In keeping with its central place in a Catholic university, the College of Liberal Arts and Sciences has a special commitment to the Christian belief that creation is an expression of the divine truth through the redemptive life, death, and resurrection of Jesus Christ, the incarnate Word of God. It also seeks to provide a Christian intellectual and moral environment, and believes that it is the common right of all to participate in creation, to seek truth, and to apply such truth attained to protect and enrich personal and communal life.

Villanova’s special Augustinian heritage enables the College to draw upon the dynamic legacy of St. Augustine, whose passionate pursuit of wisdom, understood through the metaphor of one heart and one mind, inspires its own quest for knowledge in open, intelligent, responsible, and mutually respectful interaction of points of view. This legacy is classically illustrated by the Augustinian Order’s impact on the medieval universities, its distinguished cultivation of Renaissance art, and its fostering of the scientific discoveries of

Gregor Mendel. It is further expressed in the conviction that all authentic human wisdom is ultimately in harmony with Divine Wisdom, and it invites collaboration with other Christians and peoples of other traditions who might share at least the general features and dynamics of this Augustinian vision.

In light of this legacy, the College has developed a diversified academic program and a core curriculum that provide students with a scale of well-defined universal values that equips them to be wise critics of the society in which they live, and which sustains a moral base and social consciousness that transcends economic barriers and questions of race, gender, and creed.

Academic Goals

The academic mission of the College is intimately connected with its Core Curriculum. The courses in the Core Curriculum treat a broad range of disciplines from a variety of approaches; at the same time, the Core strives to ensure depth of study and intellectual sophistication while recognizing that learning implies different modes of inquiry. The goals of the Core are to:

- Achieve a synthesis of knowledge that provides a basis for informed judgment, not simply “fact finding.” This includes learning to think and process information in a critical manner.
- Promote literacy as a foundation for intelligent discourse and the articulation of informed views. This goal acknowledges that literacy spans all disciplines, and undergraduates should demonstrate an ability to understand and utilize a wide variety of information (e.g., scientific, quantitative, cross-cultural, etc.) to articulate said views.
- Define culture in a broad sense, educating students to understand and to appreciate the interrelated patterns of customary beliefs and practices, social forms, aesthetics, and material traits that act to define a culture and its position within a larger historical and intellectual framework. Students should develop an understanding and appreciation of the diversity of cultures and experiences as well as the development of a multicultural and international perspective.
- Acknowledge that our world is vibrant and continuously redefined, not simply a static version of the past. Thus, we challenge students to understand that the present is recognizably formed from past influences. In order to assess the present and arrive at a view of its future, students must be educated to scrutinize and bring into perspective the relationship of the present day with that of the past.
- Prepare students to become active and responsible participants within society, developing an understanding of ethical responsibilities and valuing communal responsibilities.
- Encourage personal development in preparing students to regard themselves as citizens living in society, who have respect for the individual as well as the

feeling of belonging to a world community.

The College of Liberal Arts and Sciences is committed to sustaining, improving, and monitoring the effectiveness of our academic programs, guided by a comprehensive assessment plan focused on student learning outcomes. Each academic department has developed their own assessment plan for evaluating your learning experience. Please see your department/program chair or contact Dr. Seth Matthew Fishman (Office of the Dean, SAC 105) for more information. For more information on learning outcomes assessment, please visit <https://www1.villanova.edu/university/liberal-arts-sciences/about/outcomes.html>.

Mission to Students, Faculty, and Staff. The College strongly adheres to the principles of the University Mission Statement that commits Villanova to “developing and sustaining an academic environment in which the potentialities of its members may be realized.” In so doing, the College is guided by the teachings of Vatican II, which emphasized that “the human spirit must be cultivated in such a way that there results a growth in its ability to wonder, to understand, to contemplate, to make personal judgments, and to develop a religious, moral, and social sense” (Pastoral Constitution on the Church in the Modern World, 59).

In order to fulfill its academic mission of transmitting, pursuing, and discovering knowledge, the College commits itself to the hiring and retaining of outstanding teacher- scholars and dedicated staff personnel whose academic and professional interests will develop and foster the goals of the University’s mission. In hiring faculty and staff personnel, the College further commits itself to the goal of maintaining a richness of diversity by actively recruiting women and minorities. In all hiring strategies and decisions, the College strives to utilize procedures that will reliably determine the best qualified applicants.

While the College is committed to maintaining its Catholic identity, it does not seek a particular religious affiliation within its personnel. Rather, as formulated in the University’s mission, it asks that all respect its “attempts to develop an environment in which students, faculty, and staff may experience a Christian intellectual and moral perspective,” and have a willingness to enter into the conversation that gives its mission life and character.

The College is strongly committed to academic freedom that makes open discussion and inquiry possible. It believes open discussion among scholars and students is a self- correcting process that is intrinsic to academic freedom and that this process is in accord with responsible freedom, a central value of the Christian tradition, and of the thought of St. Augustine, the great theologian of Christian freedom.

The College seeks to encourage and equitably reward the valuable performance of its faculty and staff by offering competitive salaries and by

making available opportunities that will enhance their professional development. It also seeks to promote a congenial work environment that is conducive to self-motivation. In recruiting students, the College seeks to ensure the best applicant pool possible. It strives to retain students by offering excellent academic programs and by providing them with quality campus activities.

The University's LEARNING GOALS may be found on the Provost's website: <https://www1.villanova.edu/villanova/provost.html> under University Learning Goals.

Office for Undergraduate Students - *explore. experience. evolve.*

- Susan Jacobs, M.A., Assistant Dean for Undergraduate Students
- SaraBeth Baker, Graduate Certification Specialist
- Sofia Bermudez, M.Ed., Assistant Director of Professional Development
- Linda Boettcher, M.A., Director of Academic Advising
- Andy Bove, M.A., Associate Director of Academic Advising
- Charles Francisco, Outreach Specialist
- Charlotte Holmes, Coordinator for Professional Development
- Kathleen Matkowski, Administrative Coordinator
- Kate Melony, M.S.S, M.L.S.P, Director Villanova's Program at SCI Phoenix
- Betty Lee Patch, M.A., Transfer Student Advisor
- Charisma Presley-Dougherty, Retention Manager
- Louise Russo, Ph.D., Director of Health Professions Advising
- Drew Stackhouse, Assistant Director, Systems Management
- Kate Szumanski, M.A., M.S., Director of Professional Development
- Jordan Toy, Director of Student Services
- Ann Trail, M.Ed., Health Professions Advisor
- Emily Wetzel-Ulrich, Retention Coordinator
- Christina Winterton, Ph.D., Faculty Advisor for Exploratory Sciences Office:
107 St. Augustine Center for the Liberal Arts
- Telephone: 610-519-3900 Website: <http://ous.villanova.edu>

Vision. The Office for Undergraduate Students aspires to be at the forefront in student support by continuously improving our services and advising in academics, professional development, and experiential education. We strive to create a welcoming and supportive environment for an increasingly diverse student population. We seek to foster collaborative relationships between University community members to promote student growth in mind, body, and spirit.

Mission. The Office for Undergraduate Students guides and supports students from orientation to graduation as they explore the many experiential possibilities that the College of Liberal Arts and Sciences provides. We empower students to begin a process of self-discovery, providing them with the resources

to forge their own educational and professional direction.

The Office for Undergraduate Students collaborates with other University resources, enabling students to realize their full potential personally, educationally, and professionally.

Academic Advising. Linda Boettcher, M.A., Director; Andrew Bove, M.A., Associate Director; Kathleen Matkowski, Administrative Coordinator 107 St. Augustine Center for the Liberal Arts 610-519-3900

Academic Advising provides individual attention and guidance to students as they transition into the University and begin to explore their educational interests. Faculty Advisors encourage students to reflect on their course selections and experiential learning opportunities, enabling them to make informed choices about their educational and professional direction. By connecting students to a wide variety of support services, we seek to promote students' development and to facilitate their success.

Through our first-year *Academic Advising* course, we teach students how to obtain the most from their education. Topics include understanding the value of a liberal arts education and the core requirements, conveying professionalism, assessing and strengthening study skills, learning time management, making informed educational and professional choices, and maintaining student wellness.

Exploratory Science Advising. Christina Winterton, Ph.D., Faculty Advisor 107 St. Augustine Center for the Liberal Arts, 610-519-3900

Exploratory-Science affords students who have a genuine interest in the natural sciences, but who are somewhat uncertain as to which discipline to pursue, an opportunity to explore a variety of options during their first year at Villanova University. During their freshman year, students enroll in one or two natural science courses with laboratory and mathematics. The Exploratory-Science option provides students with the opportunity to make a considered and data-based decision as to which discipline they wish to pursue for their four years.

Health Professions Advising. Louis Russo, Ph.D., Director Health Professions Advising Ann Trail, Advisor - 143 Mendel Science Center 610-519-4822
hpa@villanova.edu

Those students planning to apply to any health professional degree program (Medical, Dental, Physician Assistant, Veterinary, Optometry, Physical Therapy, etc.) should contact the Health Professions Advising Office for information on prerequisite coursework, pre-admittance examinations, experiential opportunities, and application procedures. Information sessions related to career exploration, program specifications, and application preparation are held

throughout the academic year to enhance applicant knowledge and application quality.

Internship Program. Kate Szumanski, M.A., M.S., Director of Professional Development; Sofia Bermudez, M.Ed., Assistant Director of Professional Development Charlotte Holmes, Coordinator of Professional Development 107 St. Augustine Center for the Liberal Arts 610-519-4232

The Internship Program provides resources to students, which include individual professional development one-on-one meetings and brainstorming sessions, professional development workshops, and other special events, to assist students as they explore experiential educational opportunities.

Through internships, students refine their career interests, develop their professional skills, network with working professionals, and gain valuable experience in a variety of fields. The Internship Program allows students to earn academic credit toward their major or minor, or earn general elective liberal arts credits. Students are required to submit an internship-for-credit application to seek academic credit for their internship experiences. The application is available on the OUS Web site.

Leadership and Professional Development. Kate Szumanski, M.A., M.S., Director of Professional Development; Sofia Bermudez, M.Ed., Assistant Director of Professional Development 117 St. Augustine Center for the Liberal Arts 610-519-3942

The Professional Development area within OUS offers programming, mentoring support, and courses that enable students to identify their strengths, explore professional and educational options, and develop the skills necessary to prepare them for professional life. Through this process, we empower students to pursue their aspirations. The Professional Development curricular component provides students with a foundation for learning how their academic knowledge and skills transfer into the professional world.

Students learn how to create a professional résumé, research careers and industries, identify internships, answer job interview questions, and network with alumni. Additional courses offered to enhance professional growth include the Legal Profession, Professional Communication, Networking for Success, Social Networking, Creativity and Innovation, and Introduction to Professional Writing.

Retention and Student Support. Charisma Presley, M.A., Manager; Emily Wetzel-Ulrich, B.S., Coordinator, 107 St. Augustine Center for Liberal Arts 610-519-7429 or ousretention@villanova.edu

OUS Retention & Student Support promotes student persistence and retention,

with an emphasis on factors that may affect a student's academic progress. In the areas of mental health, unforeseen events, a lack of academic resources such as books or technological issues, or food or housing instability, we respond to concerns and provide leadership. In order to promote academic performance, we also obtain data, give leadership, professional development, web resources, and assistance to students, faculty, staff, and parents. We oversee the Resource Pantry, which offers a variety of programs aimed at removing or reducing barriers to degree completion. The office's mission is furthered by strong collaborative partnerships.

We manage the College's Academic Early Alert Systems, Faculty Feedback Request, and Attendance Verification, all of which are designed to provide feedback on academic performance to advisors and students with the goal of assisting students in successfully completing their courses and connecting them with important campus resources. All Leave of Absences and CLAS Withdrawals are also handled by us.

The Bridge Society. Kate Szumanski, Advisor, 107 St. Augustine Center for the Liberal Arts 610-519-4232

The BRIDGE Society in the College of Liberal Arts and Sciences is designed to: build relationships among students and alumni in the College of Liberal Arts and Sciences; inspire both student professional development and alumni institutional development; provide a forum for students to gain the experiences necessary to forge their future direction. The BRIDGE Society: provides an opportunity for students to identify with the College, in addition to their major; creates the opportunity for student leadership within the College of Liberal Arts and Sciences; gives Arts & Sciences students the opportunity to explore potential career paths and meet alumni & employers in their fields of interest.

The Core Curriculum

Core Curriculum Overview. Every degree program in the College of Liberal Arts and Sciences is made up of three components: the Core Curriculum, courses in the major, and free electives. **Free electives** are required for all students in the College of Liberal Arts and Sciences and are often used to explore academic interests and determine educational directions. They may also be used to fulfill minors, concentrations, or additional majors.

Courses in the Core Curriculum treat a broad range of disciplines from a variety of approaches; at the same time, the Core Curriculum strives to ensure depth of study and intellectual sophistication while recognizing that learning implies different modes of inquiry. An essential component of the Core Curriculum is a focus on writing. In the pursuit of their degrees, students take a number of courses in which writing requirements play a central role, from the Foundation Courses, including the Augustine and Culture Seminars and the Core Ethics

course, to the Core Literature and Writing Seminar. In addition, each major program includes a required research course, normally taken during junior or sophomore years, and a senior capstone course, which is a significant culminating experience that leads students to reflect on the various components of their major curriculum.

The Core aims to advance culture in a broad sense, training students to understand and to appreciate the interrelated patterns of customary beliefs and practices, social forms, aesthetics, and material traits that act to define a culture and its position within a larger historical and intellectual framework. This educational program does not simply look to the past, but acknowledges that culture is vibrant and continuously redefined. The Core Curriculum challenges students to understand how the present is recognizably formed from past influences, and that in order to assess our culture and arrive at a view of its future, students must be trained to scrutinize and bring into perspective the relationship of the present culture with that of the past.

In fostering active participation in learning, the Core prepares students to become active participants within society, to engage in the process of informed political debate, and to encourage an understanding and appreciation of the diversity of cultures and experiences, a respect for the individual, and the development of a multi-cultural and international perspective. The Core thus encourages personal development in preparing students to regard themselves as citizens living in a democratic society, as belonging to a world community, and as therefore having communal responsibilities.

Summary of Core Curriculum Course Requirements

1. Foundation Courses
 - a. Augustine and Culture Seminar (ACS 1000/1001) (2 courses)
 - b. Theology and Religious Studies (THL 1000) (1 course)
 - c. Philosophy (PHI 1000) (1 course)
 - d. Ethics (ETH 2050) (1 course)
2. Language Requirement (Proficiency)
3. Mathematics or Statistics (1 course)
4. Natural Sciences (2 courses w/ labs)
5. Literature and Writing Seminar (1 course)
6. History (1 course)
7. Social Sciences (2 courses)
8. Fine Arts (1 course)
9. Theology and Religious Studies – Upper Division (1 course)

Diversity Requirement. Two of the courses counting towards degree requirements must have a Diversity attribute. Select one course from two of the three possible areas of diversity as indicated by the Diversity 1, Diversity 2, or Diversity 3 attributes. (See detailed explanation below)

Fulfilling Core Curriculum Course Requirements - Foundation Courses *Augustine and Culture Seminar (ACS) Sequence (2 courses)*

ACS focuses on the question: Who am I? The first seminar (ACS 1000 Ancients) contains readings from Hebrew and Christian scriptures, Greek and Roman antiquity, Augustine, and the High Middle Ages, and is dedicated to understanding the foundations of our shared intellectual tradition. ACS 1001 Moderns continues to address the question of identity with texts from the Renaissance to the modern era.

The two-semester ACS course sequence must be taken by all students during the first year of study. Because it is important that students take the Augustine and Culture seminars early in their college careers, students are permitted to drop or withdraw from the courses without academic penalty only under special circumstances. Requests to drop or withdraw must be made to the Assistant Dean for Undergraduate Students. If a student receives permission to drop or withdraw, he or she must take the course at the next possible opportunity.

Theology and Religious Studies (1 course)

THL 1000 involves students of every religion, culture, and worldview in examining the Augustinian vision of “understanding what we believe” (On Free Choice of the Will 1.4).

Students investigate Christian and non-Christian religious practices, beliefs, and traditions that have developed over time in diverse cultural and religious contexts as they explore faith, reason, and culture in their many, textured relationships.

The course may examine Catholicism theologically, historically, and culturally (Catholic Studies track); explore Christian theological traditions in their cultural contexts (Faith, Reason, and Culture track); or survey religiosity in general and global religions, including Christianity, in particular as well as their commonalities, differences, and cultural expressions (Global Religious Experience track).

With these foci, the course introduces students to the sources and major thinkers that have shaped responses to the fundamental human questions that underlie all religions and shape the human search for meaning. Students engage religious truth claims, themes, values, and witness as resources for analyzing and critically evaluating contemporary cultural challenges.

Philosophy (1 course)

Knowledge, Reality, Self (PHL 1000) explores the philosophical responses to the

questions of how we can know, what is real, and what is the nature of the human person.

Ethics (1 course)

The Good Life: Ethics and Contemporary Moral Problems (ETH 2050) provides critical reflection on distinctive and viable visions of the moral life, with particular focus on Christian, especially Roman Catholic, Augustinian accounts, and explores the significance of different visions through an examination of various contemporary moral questions. ETH 2050 is the capstone of the foundation courses. Normally students should take ETH 2050 by the end of their junior year, after taking the other four foundation courses.

Language Requirement (Proficiency). Language proficiency is required either: 1) through the intermediate level in French, Italian, Spanish, or Latin; or 2) through the introductory level in Ancient Greek, Arabic, Chinese, Irish, Japanese, or Russian. Students who are already proficient in other languages may petition for an exemption from the Core Curriculum Language Requirement subject to the conditions under F below.

Students may satisfy the Core Curriculum Language requirement in one of the following ways:

Option A: Advanced Placement Examination

Students may satisfy the requirement by attaining a score of 4 or 5 on the applicable Advanced Placement exam. Exams that fulfill the requirement and the course equivalency are listed on the Advanced Placement table in Part III of this handbook.

For any language not offered at Villanova (such as German), students will not receive course credit for the AP exam in that language. As with other languages, however, students who attain a score of 4 or 5 will satisfy the language requirement. Students who satisfy the requirement without receiving course credit may need to take additional free elective courses to meet the required number of credits for degree completion. Any questions regarding Advanced Placement credit should be directed to the Office for Undergraduate Students in SAC 107.

Option B: Comprehensive Examination (Proficiency exam)

Students may satisfy the requirement through satisfactory performance on a proficiency exam administered by the appropriate department. Proficiency exams are administered on specific dates and students must register in advance. Students deemed proficient by achieving a grade of C or better on the proficiency examination may need to take additional free elective courses to meet the required number of credits for degree completion.

Option C: Credit by Exam

Students who would like to pursue credit for language fluency may do so through the Credit by Exam program for any language taught at Villanova other than their native language. Students must meet all conditions in place through the College of Liberal Arts and Sciences to be eligible for the Credit by Exam program. There is an associated fee per credit. Arrangements for Credit by Exam should be made in the Office for Undergraduate Students in SAC 107. Information about Credit by Exam is available under the policies section of this handbook.

Option D: Latin Alphabet Languages – Latin and Romance Languages (French, Italian, Spanish) Students selecting this option must take courses through the intermediate II level in the language they have chosen. Students who studied French, Italian, Latin, or Spanish in high school must complete an online language placement exam (French, Italian, Spanish) or questionnaire (Latin) to be placed into the appropriate level. Because placement tests provide only a rough indicator of a student's level, students who are placed into courses higher than intermediate II must complete the course to fulfill the requirement. Students who are placed directly into an intermediate II course or higher may need to take an additional course to meet the required number of credits for degree completion.

Option E: Non-Latin Alphabet Languages - Irish And Critical Languages (Ancient Greek, Arabic, Chinese, Japanese, Russian)

Students selecting this option must take courses through the introductory II level for the language they have chosen. These courses are typically four to six credits and meet four to five days per week, depending on the language. Students should contact individual departments with any questions regarding placement in these languages. Because placement tests provide only a rough indicator of a student's level, students who are placed into courses higher than introductory II must complete the course to fulfill the requirement. Students who are placed directly into an introductory II course or higher may need to take an additional course to meet the required number of credits for degree completion.

Option F: Petition for Exemption Due to Documented Language Proficiency

Students who are fluent in languages for which no comprehensive exam is offered through the College of Liberal Arts and Sciences may petition for an exemption from the Core Curriculum Language requirement by submitting the Petition for Core Language Requirement Exemption in MyNOVA along with documentation of proficiency from an accredited institution located. International students may submit Test of English as a Foreign Language (TOEFL) scores as documentation of proficiency for the purposes of the petition process. Students deemed proficient through the petition process may need to take additional courses to meet the required number of credits

for degree completion.

NOTES:

Placement tests are used to place students only and are not to be confused with a proficiency exam. Students seeking accommodations for documented learning disabilities should contact the Office of Learning Support Services in Falvey 212. Additional questions regarding the Core Curriculum Language requirement should be addressed to a student's faculty advisor or to the Office for Undergraduate Students in SAC 107.

Mathematics or Statistics (1 course)

Students must take one course in either Mathematics or Statistics. Any course offered by the Department of Mathematics and Statistics fulfills the Core Curriculum requirement. Certain courses offered by other departments (e.g., Computer Science and Philosophy) also fulfill the requirement. These courses are designated by the Mathematics A & S Core attribute.

Natural Science (2 courses with laboratory)

Non-science majors meet the Core Curriculum Natural Science requirement by taking two semesters of Mendel Science Experience (MSE), thematically-based lecture/laboratory courses designed for non-science majors; or two semesters of lecture/laboratory courses designed for science majors.

Science (AST, BIO, BIOC, CHM, CBN, CSC, ENV, MAT, PHY - B.S. only, PSY - B.S. only) majors meet the science requirement through the regular program of study in their major.

Literature and Writing Seminar (1 course)

All students take a thematic literature and writing seminar course. Courses designated with the Core Lit & Writing Sem attribute fulfill the requirement.

History (1 course)

This requirement is met by taking a specifically designated course designated by the Core History attribute.

Social Sciences (2 courses)

Students satisfy the requirement by taking two courses designated by the Core Social Sciences attribute.

Students majoring in Economics, Geography, Political Science, Psychology, or Sociology fulfill the Core Social Science requirement through the regular program of study in their major.

Fine Arts (1 course)

The requirement is met by taking a course that focuses either on the creative processes that go into making a work of art, or on analysis and interpretation of the products of that artistic creativity. All courses designated with the Fine Arts Requirement attribute fulfill the Core Curriculum requirement.

Theology and Religious Studies – Upper Division (1 course)

The upper division Theology and Religious Studies Core Curriculum requirement develops the theme of faith seeking understanding, engaging culture from a specific disciplinary perspective. Students must take THL 1000 before taking this upper division course designated by the Core Theology attribute.

Diversity Requirement (2 courses): Consistent with the University’s Mission Statement and its implementation of the new Core Curriculum in the College of Arts and Sciences, students will take at least two courses designated as “diversity.” Learning to see through the eyes of other peoples and cultures is essential to becoming a citizen of the world. Beyond introducing students to the contextual study of diverse groups, diversity education must foster understanding of how individuals are affected within systems of power, oppression, deprivation, marginalization, and privilege. Students are required to select two courses, covering two out of the three areas below:

Diversity 1: Courses that focus on populations (often named as non-dominant, minority, or impoverished groups) in the U.S. or Western Europe, and the systems or mechanisms that give rise to the experiences of power, privilege, and marginalization.

Diversity 2: Courses that focus on women’s experiences and/or highlight the relationship between gender, culture, and power.

Diversity 3: Courses focus on the culture, economics, politics or ecology of societies and nations other than those of Western Europe and the United States and that emphasize power, privilege, and marginalization or a critical analysis of how these cultures define and express themselves.

NOTES:

- Service-learning courses, internships, and other experiential or community-based learning courses may be applied toward this requirement, provided they include a significant reflective component, just as traditional diversity courses do, and have been pre-approved for diversity course credit.
- Study abroad courses may be applied toward this requirement; such courses will be assessed the same way as courses at Villanova.
- Although some courses have more than one Diversity attribute, all students must take two different courses; a single course with multiple attributes may not

be used to fulfill both Diversity course requirements.

- The Diversity Requirement cannot be fulfilled by independent study or a senior thesis.
- Language courses cannot fulfill the requirement, although literature courses in another language may fulfill the requirement if they are designated with a Diversity attribute.
- A student may fulfill one Diversity course requirement (DIV 1) by taking three 1-credit IGR workshops.

Learning Outcomes and Assessment

University and CLAS Policies. Unless otherwise noted, the College of Liberal Arts and Sciences follows the general University academic policies and regulations listed in the University Catalog. It is the responsibility of the student to know and comply with all academic policies and regulations of the University and the College of Liberal Arts and Sciences. Such policies may change without prior notice. The policies in this handbook are a sample of University and College policies that are frequently referenced by students and are intended for summary purposes only.

Academic Bankruptcy. The Academic Standing Committee may allow a freshman student to declare academic bankruptcy and repeat the semester or academic year with a new start on the cumulative average (though a record of the year's work will remain on the transcript). Internal transfer students and students who have switched degree programs within the CLAS may be permitted to bankrupt individual courses from their previous program that do not apply to their new curriculum. Students must successfully complete two consecutive semesters in the CLAS and attain a minimum GPA of 2.50 each semester before they are eligible to request bankruptcy for specific courses. Bankrupted courses will remain on the student's transcript but will be excluded from the calculation of the GPA and earned credit hours. Students must petition the Assistant Dean for Undergraduate Students (Susan Jacobs in OUS, SAC 107) for the exclusion.

All requests for Academic Bankruptcy are granted at the discretion of the Assistant Dean for Undergraduate Students (Susan Jacobs in OUS, SAC 107). Once a course has been bankrupted the action is permanent and cannot be reversed. In no case will tuition be refunded.

Academic Dismissal. Students whose cumulative GPA remains below 2.0 for two consecutive semesters or who fail to make satisfactory academic progress (i.e., successful completion of at least 12 credits per semester) may be dismissed from the College of Liberal Arts and Sciences. Students on academic probation who receive final grades of N, Y, F, NF, U, or W are also subject to academic dismissal. The Assistant Dean for the Office of Undergraduate Students will inform the student of the dismissal as soon as possible. Normally,

the student will be allowed to appeal the dismissal to the CLAS Academic Standing Committee. In some cases (e.g., when a student has been dismissed previously or been placed on academic probation multiple times) the student may be dismissed without right of appeal. There is no further process of appeal beyond the Assistant Dean, OUS.

Academic Probation. Any student with a cumulative or technical GPA below 2.0 or who fails to make satisfactory academic progress (i.e., successful completion of at least 12 credits per semester) will be placed on academic probation by the CLAS Academic Standing Committee. Students who have been placed on academic probation are required to contact their faculty advisor immediately to discuss their probationary status and develop an academic success plan.

While on academic probation, students are required to earn a grade of C or higher in all courses and may be restricted to taking 13 credits. Any F, U, W, or Y grades may lead to academic dismissal. Students on probation are not eligible for N (incomplete) grades. Students on academic probation will normally be allowed only one semester to raise their GPA to the required minimum of 2.0.

Academic Progress. To qualify for a bachelor's degree, a student must earn a cumulative grade point average of at least 2.00 (in addition to completing the studies prescribed for the degree sought). Students must also advance in their studies by successfully completing a minimum of 12 credits per semester. Students who fail to make satisfactory academic process are subject to review by the Academic Standing Committee. Those students may be placed on Academic Probation. In circumstances involving those students who have entered Villanova University through the Academic Advancement Program, satisfactory progress of the student will be determined by the Academic Standing Committee and/or Assistant Dean for Undergraduate Students. In the event that, due to poor high school preparation, additional time is necessary for the student to complete the requirements towards graduation, the student will be viewed as being in a five year program. Satisfactory progress will be viewed accordingly.

Academic Standing. Students with a cumulative or semester GPA below 2.00 will be reviewed by the Academic Standing Committee for appropriate action. Students in Bachelor of Science programs whose technical GPA falls below 2.00 will also be reviewed by the committee. In most cases, students will either be placed on academic probation or dismissed. The Academic Standing Committee also reviews the records of students who have failed to make satisfactory academic progress by successfully completing a minimum of 12 credits per semester.

Advanced Placement and International Baccalaureate Credit

Students who wish to receive Advanced Placement (AP) credit should request that the College Board send their AP scores to Villanova University (code #2959). AP scores are received by the Registrar's Office and forwarded to the Office for Undergraduate Students (OUS), which determines course credit according to the criteria in the tables below. AP scores for incoming freshmen usually reach Villanova by mid-July. If scores are received before Fall Semester classes begin, the OUS will communicate with the student and authorize the Registrar's Office to add the appropriate course credit to the student's academic record. If scores are received after classes begin, the OUS will direct the Registrar to add any further course credit for which students are eligible. AP credits appear in the Transfer Credit area of the student's academic transcript. All AP/IB scores must be accepted and approved before a student completes two semesters at Villanova.

New students who have taken AP or International Baccalaureate Higher Level (IB) exams should check with their academic advisor during the first week of classes to verify Villanova's receipt of official scores and ensure that proper adjustments have been made to their academic record and course schedule. Except for Language, AP and IB credit may not be used to fulfill Core Curriculum requirements. AP and IB credit may be used to fulfill requirements for majors, minors, concentrations, and certificates. AP/IB credit will be treated as transfer credit and all transfer credit policies will apply. Students who wish to remove any AP/IB credit from their record should complete the "Request to Remove AP Credit" form available on MyNova. Once this request has been completed, it cannot be reversed.

International Baccalaureate Credit and Course Equivalence

(Note: Credit is only given for a higher level exam)

<u>Subject</u>	<u>Score of 5/Credit</u>	<u>Score of 6 or 7/Credit</u>
Biology		BIO 2105 4
		BIO 2106 4
Chemistry		CHM 1103 1
		CHM 1104 1
		CHM 1151 4
		CHM 1152 4
Computer Science HL	CSC 1051 4	CSC 1051 4
Information Technology	CSC 1930 3	CSC 1930 3
Economics	ECO1001 3	ECO 1001 3
	ECO 1002 3	ECO 1002 3
English	ENG 1050 3	ENG 1050 3
French A2 or B	0	FFS 1121 3
Geography	GEV 1002 3	GEV 1002 3
History Americas		HIS 4405 3
History Europe		HIS 1021 3
Italian A2 or B	0	ITA 1121 3
		ITA 1122 3

*Sample of lab work needed.

Advanced Placement Equivalency Chart

Advanced Placement <u>Subject-Test Number</u>	Score of 3 <u>Courses</u>	Score of 4 <u>or 5 Credits</u>	<u>Courses</u>	<u>Credits</u>
Art History – (13)			AAH 1101 or AAH 1102	3
Biology – (20)			BIO 2105 BIO 2106	4 4
Calculus BC – (68)			MAT 1500	4
Calculus Subgrade – (69)				
Calculus BC – (68)			MAT 1500 MAT 1505	4 4
Chemistry – (25)			CHM 1103 CHM 1104 CHM 1151 CHM 1152	1 1 4 4
Chinese Language & Culture – (28)			CHI 1111 CHI 1112	6 6
Computer Science A – (31)			CSC 1051	4
Computer Science Principles – (32)			CSC 1020	3
Economics Macro – (35)			ECO 1002	3
Economics Micro – (34)			ECO 1001	3
English Language & Composition – (36) or English Language & Composition – (37)			ENG 1050	3
Environment Science – (40)			GEV 1052	3
French Language & Culture – (48)			FFS 1121 FFS 1122	3 3
Government and Politics: Comp – (58)			PSC 1300	3
Government and Politics: US – (57)			PSC 1100	3
History, European – (43)			HIS 1021	3
History, US – (07)			HIS 1002 or HIS 1003	3
History, World – (93)			HIS 1040 or HIS 1050	3
Human Geography – (53)			GEV 1002	3
Italian Language & Culture – (62)			ITA 1121 ITA 1122	3 3
Japanese Language & Culture – (64)			JPN 1111 JPN 1112	6 6
Latin – (60)		Placement Only	LAT 1121 LAT 1122	3 3
Physics C: Mechanics – (80)			PHY 1100	3
PHY 1101 1				
Physics C: Electricity and Magnetism – (82)			PHY 1102 PHY 1103	3 1
Psychology – (85)			PSY 1000	3
Spanish Language – (87) or Spanish Literature & Culture – (89)			SPA 1121 SPA 1122	3 3
Statistics – (90)			MAT 1230 or CSC 2300	3

Apply for Re-Admission. Students applying for re-admission to the full-time undergraduate day program should complete the “Application for Re-Admission to the College of Liberal Arts & Sciences” form. Generally, a degree program should be completed within six years of original start date. However, students may return to full-time day student status within approximately ten years of their original date of enrollment. Once more than twelve years have passed from original start date, former students must apply to complete their degree through the College of Professional Studies.

If fewer than ten to twelve years have passed, and you wish to take classes in person on a full-time basis, please forward this form and the accompanying items to the Office for Undergraduate Students (SAC 107) via email at as-ous@villanova.edu, fax at (610) 519-6322 or the address below:

Office for Undergraduate Students Attn: Susan Jacobs 800 E. Lancaster Avenue, SAC 107, Villanova, PA 19085

Applications take several weeks to be reviewed since we may need to access old records. Please submit the application no later than November 15 for a possible spring start, April 15 for a summer start and July 15 for a possible fall start. Applications received less than one month prior to the start of a new semester will be considered for the following semester.

Attendance. Class and laboratory attendance for first year students is mandatory. A first-year student will receive a grade of “Y” (failure) whenever the number of unexcused absences in a course exceeds twice the number of weekly class meetings for the course. For students beyond the first year, attendance policies are determined by the instructors of the various courses. The full policy regarding attendance is available on the Provost’s website: <https://www1.villanova.edu/villanova/provost.html>.

Auditing a Course. A student may elect to audit a course to reinforce and strengthen his/her current knowledge or to explore new areas without the pressure of tests and grades. No academic credit is earned for auditing a course; however, the audited course is noted on the student’s official record. Permission to audit a course must be obtained from the course instructor. Forms to request to audit the course are available online. Visit MyNova and search for OUS Forms.

CLAS Students taking College of Professional Studies Courses. Students in the College of Liberal Arts & Sciences are not permitted to enroll in courses restricted to the College of Professional Studies. Course restriction information is available through searching the master schedule in MyNova.

Closed Section. Students will not be permitted to enroll in closed sections. Exceptions to this rule will be made only by the chairperson of the academic

department offering the course. If other sections or other courses are available to satisfy the degree requirements, then the exception will not be granted. Student employment conflict is not a legitimate reason for admittance to a closed section.

Credit by Exam. To encourage independent study and recognize personal knowledge and mastery of subject matter, Villanova University provides qualified matriculated students with the opportunity to “test out” of certain courses. The student who successfully passes such an examination satisfies the requirements of and earns the credit for the respective course. For more information, [see the webpage located here.](#)

Limitations: Participation in the program is not automatically given, and is contingent upon the following limitations:

- The student must be matriculated, and offer evidence of sufficient background to the department offering the exam to have a reasonable command of the subject matter.
- If the student has previously taken the exam to waive course requirements, the student may not take an exam for credit in the same course.
- A student cannot use this program to pass a course for which the student has failed, either at Villanova or any institution.
- A student on probation, or who is suspended, may not take an exam for credit.

Conditions: The granting of credit is contingent upon the following conditions:

- A student may not challenge a foreign language requirement in their primary language. Once a sequence of language has begun, a student may not revert to a lower-level course.
- A fee of \$130 per credit hour will be levied
- Credit granted will not exceed that assigned to the course as listed in the University Catalog
- The maximum credit allowed the student through this program is 30 hours
- Credit for no more than three courses may be applied to a student’s major
- A passing grade of “CE” will appear on the student’s transcript; a failing grade will not be recorded
- The test dates, determined by the Director of Student Services, will take place shortly after the mid-semester break and before the pre-registration period in the Fall and Spring. The exam is also given in July.

Procedure. The application process is the responsibility of the student and must be completed one month before the date of the exam. The student begins the application process with the director who will provide them with the appropriate forms and directions for completion. The form is then taken to the Bursar’s Office for validation once the appropriate fee is paid. A “no show” student forfeits all fees. During the week prior to the exam, the department will provide the director with a copy of the exam for each candidate. This will be in a

sealed envelope properly identified with the student's name, Banner ID, department, and exam title on its front. Notification of students of time and place of the exam, and other arrangements, are the responsibility of the Director. Students who fail the exam have the right to review it with the faculty in question. Exams are destroyed in the semester in which they are administered. The Director will notify the students and the Registrar's Office of the exam results.

Credit Increases. Students should complete the "Request for a Credit Increase" form if trying to register for five courses of three or more credits (and additional 1 to 2 credit courses) and need more than 17 credits, if an Arts student, or 19 credits, if a Sciences student. The form should be completed prior to the assigned registration time and submitted it to the Office for Undergraduate Students.

Note: If a student's cumulative GPA is at least 3.0 and she/he/they would like to take a sixth course with credits totaling to 19 credits, the credit limit is raised after the final registration period for students with a cumulative GPA of 3.0 or higher for arts students. Students that fall under this category do not need to fill out a form.

Cross College Majors. Students in the College of Engineering, M. Louise Fitzpatrick College of Nursing, and the Villanova School of Business may pursue a second major in the College of Liberal Arts and Sciences. The CLAS major will be considered a second major added to the student's primary degree program; the student will not be required to complete CLAS Core or Free Elective requirements and will not be awarded a second degree. The second major will be noted on the student's official transcript. Students who wish to pursue this option must complete the appropriate form (available in the Office for Undergraduate Students, SAC 107) and obtain all required signatures.

Declaring or Changing a Major for CLAS Students. Students wishing to declare or change their major/program should complete the "Application to Change or Declare Major" available on MyNova. The department will review and if approved will assign an advisor to the student and forward the form to the Office for Undergraduate Students. Once received, the Office for Undergraduate Students will notify the student of the status of their request.

Declaring a CLAS Minor or Concentration. To declare a concentration or minor within the College of Liberal Arts and Sciences, complete the "Application to Add or Remove a CLAS Minor or Concentration" available on MyNova. Some CLAS departments have additional requirements to apply to the minor. Consult with the department for additional information.

Degree Requirements. Every degree program in the College of Liberal Arts and Sciences is made up of three components: the Core Curriculum, Courses in the Major, and Free Electives. The Baccalaureate degree is awarded when the curriculum prescribed by the College for one or more of the various degree

programs has been satisfied. Candidates for graduation must meet all of the following **seven requirements**:

1. A minimum of 122 credit hours.
2. The successful completion of the Core Curriculum, academic major requirements, and free electives*.
3. A cumulative GPA of at least 2.00. (Science students must also have a minimum technical grade point average of at least 2.00).
4. A minimum of half of the Core Curriculum requirements must be fulfilled at Villanova University.
5. A minimum of half of the requirements for the major must be fulfilled at Villanova University.
6. The final 30 credits of the degree program must be earned at Villanova University or a Villanova University approved program.
7. At least 61 credits must be earned at Villanova University.

**Please note that a maximum of 10 credits in courses fewer than 3-credits may be applied to a student's free-elective area. Lab courses do not count toward the 10-credit limit. Further restrictions regarding subject of these courses apply.*

See the Part-time Studies Catalog for information on the Bachelor of Interdisciplinary Studies Degree (BIS), the Bachelor of Arts in General Arts, and the Associate Degrees.

Double Majors/Primary & Secondary Majors. By default, the first major that a student declares is treated as their primary major. A student may not declare a secondary major without first declaring their primary major. Students may declare a secondary major by completing the "Application to Declare/Change/Drop Major" form available on MyNova. Students may not double major in both Comprehensive Science and in another science OR Liberal Arts and another major.

Dual Degree Policy. Normally, a student may receive only one degree, regardless of how many majors the student earns. Students who have completed all the requirements for two or more degrees – e.g., B.B.A. and B.S.A, or B.B.A. and B.A, or B.A. and B.S.– must choose which degree to take – unless they have completed 43 or more additional credits beyond the greater of the two program credit requirements, in which case they may receive two degrees and two diplomas. Multiple majors, regardless of college, will appear on a student's transcript.

F Grade. Required courses carrying a final grade of F must be repeated unless the student transfers to another college of the University where the course for which the F grade was received is not a requirement for the degree. The reasons for student deficiencies are reported by the faculty member at mid-semester and at the end of the semester to the Office for Undergraduate Students.

Fast Forward Courses. Transfer Credit will not be awarded for Accelerated or

Fast Forward courses. In order for a non- professional three-credit course to be considered for transfer credit, the course must have met on at least 15 different days and with a minimum total meeting time of at least 37 hours. For courses in question, the student must provide documentation stating the manner in which the course was taught along with the official transcript. Courses in professional studies will be evaluated on a case- by-case basis. The College reserves the right to test students to assess course outcomes.

Final Exams and Finals Week. Occasionally students will encounter conflicts in the examination schedule such that two of a student's examinations are scheduled at the same time or three examinations are scheduled on the same day. In the event of such a conflict, the student must notify the instructor at least seven days in advance of the scheduled exam. The instructor will make alternative arrangements for the student to complete the examination. In resolving conflicts, multiple section exams should take precedence over exams for a single section, and courses in the major should take precedence over non-major courses. Extraordinary difficulties encountered in effecting such an arrangement will be resolved by the Assistant Dean for Undergraduate Students (Susan Jacobs in OUS, SAC 107). The full text of this policy is available on <https://www1.villanova.edu/villanova/provost/resources/student/policies/finalexaminations.html>.

Grade Extensions on Incomplete Grades. Students who have taken an incomplete (i.e., "N") grade and need additional time to complete the work due to extenuating circumstances must first gain the professor's approval. If the professor grants the request, the student and professor must agree upon a completion date for the work, complete a "Request for Grade Extension on an Incomplete Grade" form, and submit it to the Office for Undergraduate Students for the Assistant Dean's approval prior to the initial deadline for the submission of incomplete work, which is posted on the online academic calendar. Students may only extend the deadline for courses in which an incomplete was taken once with the Assistant Dean's approval. Students may be required to submit supporting documentation.

The Remaining coursework must be completed and submitted by the established deadline or the grade will convert to an "NF" grade, which is calculated as an F in the student's GPA. No further grade extensions are possible. Any discrepancies for an Incomplete N grade must be resolved before the completion of the following semester.

Students requesting an extension can complete the "Request for a Grade Extension on an Incomplete Grade" form available on MyNova.

Mathematics Placement. The Core Curriculum requirement for all students in the College of Liberal Arts and Sciences is one course. Science majors and some others are required to take a two-semester sequence or more. Incoming students in the College of Liberal Arts and Sciences will normally take a Math or Statistics course in either the fall or spring semester of their first year. A student's

potential choice of major and career plan affects his or her choice of Mathematics courses.

Medallion of Excellence. Each department in the College of Liberal Arts and Sciences may nominate one graduating senior each year to receive a Medallion of Excellence. Generally, to be eligible for nomination, students must have earned a minimum of three fourths of their degree at Villanova in the College of Liberal Arts and Sciences and must have a minimum cumulative GPA of 3.50.

Each department has named its medallion either for a luminary from the past who has deeply affected the discipline or an outstanding person who helped to shape the course of study at Villanova University.

Overload Policy. The normal course load each semester for full-time students is five courses of three credits or more (excluding labs and other 1-credit courses). The credit limit set by the Registrar during the pre-registration period is 17-credit hours for Arts students and 19-credit hours for Science students. In order to be granted permission for an overload, a student must have a cumulative grade point average of at least 3.0 (2.75 for the summer), or have achieved senior status and need a sixth course to fulfill graduation requirements.

After all students have had the opportunity to register for five courses, credit limits will be raised by the Registrar for students with a GPA of 3.0 or higher and for seniors in order to allow them to register for a sixth course through MyNOVA using their semester PIN. In no case will permission be granted for a student to take 7 courses or more than 21 credits.

Students with a GPA lower than 3.0 that need to enroll in more than 17 credits a semester to achieve the normal course load for full-time students of five courses will need to have their credit limit raised prior to registering online. Students with this circumstance should complete a "Request for Credit Increase" form available on MyNova.

Phi Beta Kappa (ΦBK). Phi Beta Kappa (FBK) is a National Honors Fraternity for Colleges of Liberal Arts and Sciences. It was founded at the College of William and Mary in 1776. Since that time, its rigorous and comprehensive standards have made election to it a premier sign of excellence. The Sigma of Pennsylvania Chapter of Phi Beta Kappa was founded at Villanova University in April 1986.

Phi Beta Kappa standards reflect the highest ideals of liberal arts education at Villanova: education that is concerned with values and facts, as well as wisdom and knowledge; education that seeks freedom from ignorance, alienation, and inhumanity; education that values intellectual integrity and tolerance over expediency, and breadth of scholarly achievement over specialized expertise.

Juniors and seniors who are candidates for a degree in the College of Liberal Arts

and Sciences, whose academic achievements reflect the goals of Phi Beta Kappa, and who meet the following specific criteria shall be eligible for consideration for election to Phi Beta Kappa.

Candidates must have a GPA of at least 3.50 (3.80 to be elected as a junior). At least three-fourths of a candidate's academic work must have been taken in the liberal arts and sciences, as distinct from applied or professional work.

The Chapter chooses candidates with evidence of academic achievement that is of exceptional distinction and gives weight to the breadth and the quality of the overall program of courses taken by each candidate.

Election to membership in Phi Beta Kappa is wholly within the discretion of the members of the Chapter, subject only to the limitations imposed by its Constitution and By-Laws. Fulfillment of the minimum qualifications does not assure election to membership.

President: Lynne Hartnett, Ph.D. (History) Associate Professor

Vice President and President-elect: Lauren Shohet, Ph.D.

Secretary/Treasurer: Douglas Norton, Ph.D. (Mathematics and Statistics)
Associate Professor and Chair

Removal of AP Course Credit. Students requesting to remove credit for AP courses should complete the "Request to Remove AP Credit" form available on MyNova to remove credit previously earned through an advanced placement test and submitted to Villanova University. Submitting this request finalizes the removal of the credits from your transcript which cannot be reversed.

Repeat Course Request

Students may request to repeat a course that they have previously taken while at Villanova. The following conditions are in place:

The previous course will still be listed on the official transcript; repeating a course does not eliminate the previous attempt taken.

A combination of the two course grades will factor into the GPA; getting a different grade on the second attempt of a course does not replace the first attempt's grade with the second attempt's grade.

The course repeated will only count for credit once on the transcript; taking a course a second time does not mean a student receives credit for both attempts. No course can be taken a third time; a student may only repeat a course once.

To request to repeat a course, students should complete the "Request to Repeat a Course" form available on MyNova.

Required Units for Admission. Although individual consideration is given to each applicant, it is expected that all applicants, except in the most unusual

circumstances, will minimally satisfy the unit requirements listed below. A unit represents a year's work.

For Arts Curricula:

English	4	Mathematics	3
Foreign Language	2	Science	1
History or Social Science	2	Electives	3

For Science and Mathematics Curricula:

English	4	Foreign Language	2
Chemistry	1	Physics	1
Mathematics	4	Electives	4

Satisfactory/Unsatisfactory Grades. Grades of Satisfactory (equivalent to a "C" or better) and Unsatisfactory (equivalent to a "C-" or worse) are shown on the transcript but not included in the quality point average.

Sophomores, juniors, and seniors may take one elective course a semester on a satisfactory/unsatisfactory basis. The Satisfactory/Unsatisfactory (S/U) option may not be used for courses that fulfill core, major, or minor requirements, but individual departments may offer the major seminar on a S/U basis.

Credits for courses with Satisfactory grades are included in credits earned. Students must opt for Satisfactory/Unsatisfactory by the end of the Drop/Add period. Unsatisfactory grades need not be repeated. Each college may have additional regulations governing the satisfactory/unsatisfactory option, available from the college dean.

Transfer Credit Hours

Transferring Courses from Full-Time Enrollment. Students who wish to receive credit for college courses taken at another institution prior to attending Villanova must present an official transcript, course descriptions, and other documentation as needed to the Office for Undergraduate Students. Transfer credit may be awarded for college-level courses used to meet high school graduation requirements (subject to the criteria listed below). Courses will be considered for transfer credit only upon receipt of an official transcript and copies of official course descriptions. In some cases, it may be necessary to review the course syllabus to determine whether credit may be granted. It is the responsibility of the student to supply all necessary documentation.

Please note the following policies concerning transfer courses:

- In order to receive credit for a course taken at another institution, a student must have earned a grade of C or higher, and there must be an equivalent Villanova course.
- Grades earned in courses taken at other institutions are not factored into a student's Villanova grade point average.
- Transfer credits may be used to fulfill no more than half of the required

courses for each of the following: CLAS degree, major, minor or concentration, and CLAS Core Curriculum.

- Courses taken at two-year institutions, including community colleges, are eligible for transfer credit.
- Students may transfer a maximum of five non-CLAS courses that have equivalents in the other Villanova academic colleges (Business, Engineering, and Nursing). Students who wish to have such courses evaluated for transfer credit must submit course descriptions and/or syllabi to the appropriate college for review.
- Courses should be presented for evaluation prior to a student's first semester at Villanova. Courses presented after the student's first year at Villanova will no longer be eligible for credit.

Enrolling in Courses at Another Institution as a Villanova Student.

Once a student has matriculated in a degree program at Villanova University, credit for courses from other universities may only be transferred to Villanova under certain circumstances. Students may request to enroll in courses at another institution through filling out the "Request to Enroll in Courses at Another Institution" online form. The Office for Undergraduate Students must receive official transcripts for approved courses taken elsewhere before the completion of two subsequent semesters at Villanova. Credits will not be accepted for courses that take place during terms that do not align with Villanova's academic calendar.

Transfer Students - External Transfer Students. Students wishing to transfer to the College of Liberal Arts and Sciences after having attended a college or university other than Villanova must submit a formal application to the Office of University Admission. Candidates for transfer admission ordinarily will have completed a minimum of five college courses of three credits or more with a grade of C or better in each course and earned a grade point average (GPA) of at least 3.0. Students who previously applied to the College of Liberal Arts and Sciences and were placed on the waiting list will be considered for transfer admission. External transfer applicants must indicate if they are applying to another Villanova academic college in addition to the CLAS. Students who have transferred from another institution to the CLAS are not eligible to transfer internally to any of the other Villanova academic colleges. If you intend to earn a degree from the School of Business, College of Nursing, or College of Engineering, you must apply directly to that college. Transfer applications must be received by June 1 for Fall Semester applicants and November 1 for Spring Semester applicants. Offers of admission are contingent upon successful completion of the current semester's courses and may be rescinded. Applicants must present appropriate documentation in order to receive credit for courses taken at their previous institution (see above criteria). Students intending to transfer more than fifteen courses must apply to and be accepted into a major prior to enrollment.

Internal Transfer Students. Students who wish to transfer to the CLAS from other Villanova academic colleges CLAS must complete the Application to Enter the College of Liberal Arts and Sciences and must read and sign the CLAS Internal Transfer Policy form. (These forms are available on-line and in the Office for Undergraduate Students.) Applicants will be notified of an admissions decision at the end of the semester during which the application was submitted. The minimum criterion for admission to the CLAS is a GPA of 2.33 for all Arts courses taken at Villanova. Students are not permitted to transfer from the College of Liberal Arts and Sciences to the College of Professional Studies.

Undergraduates Taking Graduate Level Courses. Undergraduates may take graduate courses, provided they meet the standards set down by each college: e.g., senior standing (in terms of credits, not in terms of years at Villanova), grade point average, and appropriate permissions (advisor, assistant dean, chair). Undergraduates may take a maximum of two graduate courses in any semester. If an undergraduate takes a graduate class, in that semester the student is limited to taking a maximum of 16 credit-hours of work. Further restrictions and the full policy can be found on the office of the Provost website. <https://www1.villanova.edu/villanova/provost.html>.

Degrees

Aerospace Studies (Air Force ROTC)

Aerospace Studies Program (Air Force ROTC)

Program offered through St. Joseph's University

About. Villanova students are eligible to participate in the Air Force Reserve Officer Training Corps (AFROTC) through a cross-enrollment agreement with Saint Joseph's University. All Aerospace Studies courses will be held on the Saint Joseph's campus. The AFROTC program enables a college student to earn a commission as a Second Lieutenant in the U. S. Air Force while concurrently satisfying requirements for his/her baccalaureate degree.

Detailed information may be obtained from the Professor of Aerospace Studies, AFROTC Det 750, Saint Joseph's University, Philadelphia, Pennsylvania 19131, (610) 660-3190.

Go to <http://www.afrotc.com/> for further details.

Africana Studies - Africana Studies Minor

Contact: [Vincent Lloyd, PhD](#), Director, Africana Studies Program Location: St. Augustine Center 228

Villanova's Africana Studies Program connects faculty, students, and community members interested in the academic study of Africa and the African diaspora. With 25 faculty affiliates, about 20 courses offered each semester, a robust calendar of public events, and a major and a minor, the Program has grown significantly since its founding in 1994. Whether the topic is politics in Africa, the literature of the Black diaspora in France, the history of the US civil rights movement, or Black theology, the Africana Studies Program encourages critical thinking, crossing disciplinary boundaries, and connecting academic work with lived reality. The Africana Studies Program pursues knowledge that has often been overlooked or undervalued as we strive to develop deeply inclusive community. Indeed, as an Augustinian Catholic university, Villanova is oriented to its core by the vision of an African diasporic faith leader.

MINOR (15 credits)

The Africana Studies program consists of 15 credits.

Program Notes: Students may combine three 1-credit IGR courses to count as one of the undesignated Africana courses.

Courses taken as a part of a study abroad program may also be counted toward completion of the requirements.

Required Courses:

Item #	Title	Credits
AFR 3000	Constructs of Blackness	3
	Africana History or Literary Elective	3
	AFR Elective	9

Arab and Islamic Studies - Arab and Islamic Studies Minor (GIS)

Program Director: Catherine Warrick, Ph.D. Office Location: 254 Saint Augustine Center Telephone: (610) 519-7712

Website: <https://www1.villanova.edu/villanova/arts/aiis.html>

About. The Arab and Islamic Studies program offers a major and minor within the Department of Global Interdisciplinary Studies (GIS). The major and minor provide an interdisciplinary and comparative approach to deepen students' understandings of the history, politics, culture, religion, and literature of Arab and Islamic societies. The Arab and Islamic Studies major provides outstanding preparation for careers in government, the military, business, and nonprofits, as well as essential training for graduate education. Villanova's Center for Arab and Islamic Studies, created in 1983, offers not only the AIS major and minor, but a range of programs and events on campus every semester.

A B.A. in Arab and Islamic Studies is offered through the G.I.S. program. Information on that major may be found at this location.

MINOR (15 credits)

A minor is open to all students and requires 5 courses and 15 credits.

Program Notes:

- Courses taken abroad may count toward the minor requirements with pre-approval from the director of the program.
- Certain topics courses listed under departments (ARB, COM, GIS, HIS, HUM, PSC, THL, etc.) with significant content relevant to AIS may qualify as an elective with the permission of the Director of the Arab and Islamic Studies Program

Required Courses:

Item #	Title	Credits
	AIS Capstone Elective	3
	AIS History, Political Science or Theology Courses	6
	AIS Electives	6

Arabic Language - Arabic Language & Cultural Studies Minor

Coordinator: Barbara Romaine, M.A. Office Location: 36 Garey Hall,

Telephone: (610) 519-6302

Website:

<https://www1.villanova.edu/villanova/artsci/global/criticallangs/arabic.html>

About. The Arabic Language and Cultural Studies program offers Arabic language and linguistic study, and classical and modern literature and cultural study. Arabic is the language of a rich culture and civilization dating back many centuries; it is also the language of Islam and the Quran. This culture has produced such figures as Averroes, the medieval Aristotelian philosopher, Ibn Khaldun, the first social historian, and the modern poet Khalil Gibran.

Between the 8th and 15th centuries the volume of literary, scholarly, and scientific book production in Arabic and the level of urban literacy among readers of Arabic were greater than any the world had even known until that time.

The program represents a cutting-edge intellectual experience that provides its minors with an advantage in critiquing, understanding, and navigating the global landscape.

MINOR (28 credits)

Students can earn a minor in Arabic Language and Cultural Studies with six courses, listed below.

Required Minor Courses:

Required Courses:

<u>Item #</u>	<u>Title</u>	<u>Credits</u>
ARB 1111	Basic Arabic I	6
ARB 1112	Basic Arabic II	6
ARB 1121	Intermediate Arabic I	5
ARB 1122	Intermediate Arabic II	5
	ARB Cultural Studies Elective	3
	ARB Cultural Studies Elective	3

Art History - Art History, B.A.

Program Director: Timothy McCall, Ph.D.

Office Location: Saint Augustine Center, Room 403 Telephone: (610) 519-3897

About. The Art History Program at Villanova provides students with the knowledge and skills to interpret and critically evaluate art – and its production, reception, and materiality – from the perspectives of different societies across time. We encourage students to investigate art not only as cultural artifacts that record and reflect particular aspects of the human experience, but also as a dynamic force that has shaped complex interactions of social, political, and economic processes both in the past and the present.

In harmony with the university’s Augustinian mission and unique identity, the Art History Program emphasizes the benefits of a broader, liberal arts education. More particularly, art history students can expect to leave Villanova as sophisticated viewers and critical consumers of the visual imagery that surrounds us.

MAJOR (33 credits)

The Art History major consists of 33 credits.

Required Courses:

Item #	Title	Credits
AAH 1101	His West Art: Ancient – Med	3
AAH 1102	His West Art: Renaiss – Cont.	3
	AAH Pre-1700 Elective	3
	AAH Pre-1700 Elective	3
	AAH Pre-1700 Elective	3

Required Courses:

Item #	Title	Credits
	AAH Post-1700 Elective	3
	AAH Post-1700 Elective	3
AAH 4010	Interpreting Art	3
AAH 5010	Senior Research Seminar	3
	Non-AAH Elective	3-4
	Upper-Level AAH Elective	3

Art History Minor

Program Director: Timothy McCall, Ph.D.

Office Location: Saint Augustine Center, Room 403 Telephone: (610) 519-3897

The Art History Program at Villanova provides students with the knowledge and skills to interpret and critically evaluate art – and its production, reception, and materiality – from the perspectives of different societies across time. We encourage students to investigate art not only as cultural artifacts that record and reflect particular aspects of the human experience, but also as a dynamic force that has shaped complex interactions of social, political, and economic processes both in the past and the present.

In harmony with the university’s Augustinian mission and unique identity, the Art History Program emphasizes the benefits of a broader, liberal arts education. More particularly, art history students can expect to leave Villanova as sophisticated viewers and critical consumers of the visual imagery that surrounds us.

MINOR (18 credits)

The Art History Minor consists of 18 credits and 6 courses.

Program Notes:

- One of the art history courses could be substituted for one course related to art history in another discipline from the following list: ENG 2350, 2360, CLA 2051, 2052, COM 1300, COM 3340, 3341, 3342, 3343, FFS 2075, 2076, HIS 2309, HUM 3600, ITA 4075, MSE 2303, PHI 2750, 4150, SAR 2010, 2020, 2021, 2022, 2023, 2150, 2151, 3031, 4007, 5004.
- Art history minors are encouraged to take AAH 4010 in the fall of their senior year. With approval from the program director, students may satisfy this requirement with another upper-level course.

Required Courses:

Item #	Title	Credits
AAH 1101 or AAH 1102		3
AAH 4010	Interpreting Art	3
	Art History Minor Electives	12

Asian Studies - Asian Studies Minor

Program Director: HaiLin Zhou, Ph.D.

Office Location: Gary Hall 34 Telephone: 610) 519-6996

Website: <https://www1.villanova.edu/villanova/artsci/asian.html>

About. Asia is a dynamic world region and its cultures and societies are a complex mix of both ancient traditions and modern ideas. Asia has the fastest growing economy in the world and is the birthplace of many of our new technologies. Asia is rapidly changing, democratizing, and internationalizing in ways that present both perils and possibilities for people across the globe.

In the Villanova Asian Studies Program, we offer a Major in Asian Studies as Global Interdisciplinary Studies specialization as a way for undergraduates to learn to examine the world — and themselves — through the lens of another language and culture.

The Asian Studies program offers a major and minor within the Department of Global Interdisciplinary Studies (GIS) that helps students understand the diverse histories, politics, economies, cultures, religions, arts and literatures of Asia. The program encourages in-depth study while also promoting more general inquiry into fundamental issues, such as cultural differences among Asian nations and their social and political implications, as well as learning critical thinking and problem solving to prepare students to be responsible global citizens. The program offers them not only specialized knowledge and appreciation of a

region that has had, and will undoubtedly continue to have, a profound impact on the material and spiritual well-being of humanity, but also prepares them to play their own roles in a globalized world in the “Asian Century.”

MINOR (15 credits or 5 courses)

Program Notes

- Courses taken as part of a Study Abroad program and one internship done abroad may count towards the minor.
- Courses with the ASN attribute may count towards the minor.
- Coursework must be done on more than one country in Asia (e.g. China, Japan, Korea, India, etc.); and in more than one discipline or department (e.g., Political Science, History, Religion, Psychology, Marketing, Economics, Global Interdisciplinary Studies, etc.).

Required Courses:

Item #	Title	Credits
	Asian Studies Language Requirement	9-13
	Asian Studies Non-Language Electives	6

Astrophysics and Planetary Science - Astronomy & Astrophysics, B.S.

Chair: Edward L. Fitzpatrick, Ph.D.

Office Location: 456A Mendel Science Center Telephone: (610) 5019-4820

Website: <https://www1.villanova.edu/villanova/artsci/astronomy.html>

About. The APS Department offers a major in Astronomy & Astrophysics, leading to a Bachelor of Science degree. The major combines rigorous academic preparation with a strong research component, which usually culminates in the presentation of original research results at national astronomical conferences. The program is designed to prepare students for graduate studies in astronomy and related fields. In addition, and due to the strong and balanced Liberal Arts education, the Astronomy & Astrophysics major provides outstanding preparation for careers in science journalism and science education, as well as for essentially any technically based career.

Research facilities utilized by staff and students in the APS Department include a high- speed computing facility and a suite of computer-controlled telescopes located on the roof of Mendel Science Center. In addition, the Department is a member of the Robotically Controlled Telescope consortium, which operates a 1.3 meter telescope located at Kitt Peak National Observatory. Students also have access, via faculty research programs, to state-of-the-art astronomical data from NASA- supported facilities such as the Hubble Space Telescope and the Spitzer Space Telescope, and a variety of national and international ground-based facilities.

MAJOR (86 credits)

The major consists of 86 credits, including courses in astronomy, physics, mathematics, and computer science. Students completing the major will also qualify for a minor in physics.

Required Courses:

Item #	Title	Credits
AST 2120	Sun and Stars	3
AST 2121	Solar System Astronomy	3
AST 2122	Understanding Our Universe	3
AST 2123	Astrodynamics: Kepler & Beyond	3
AST 2133	Observational Lab I	2
AST 2134	Observation Lab II	2
AST 3141	Galactic Astronomy	3
AST 3142	Intro to Astrophysics	3

Required Courses:

Item #	Title	Credits
AST 3143	Astrobiology, Planets, & Life	3
AST 3148	The Prncpl of Scientific Model	3
AST 4121	Undergrad Research I	3
AST 4122	Undergrad Research II	3
CSC 4630	Software Dev and Systems	3
MAT 1500	Calculus I	4
MAT 1505	Calculus II	4
MAT 2500	Calculus III	4
MAT 2705	Diff Equation with Linear Alg	4
PHY 2410	University Phy: Mechanics	3

Required Courses:

Item #	Title	Credits
PHY 2411	Lab: Mechanics	1
PHY 2412	Univ Physics: Elec & Mag	3
PHY 2413	Lab: Elec & Magnetism	1
PHY 2414	Univ Physics: Thermo	3
PHY 2415	Lab: Thermodynamics	1
PHY 2416	Modern Physics	3
PHY 2417	Lab: Modern Physics	1
PHY 2601	Computational Phy Lab I	1
PHY 2603	Computational Phy Lab II	1
PHY 4100	Mechanics I	3
PHY 4200	Mathematical Physics I	3
	Upper-Level Physics Elective	3
	Upper-Level Physics Elective	3
	Upper-Level Physics Elective	3

Astronomy & Astrophysics Minor

Chair: Edward L. Fitzpatrick, Ph.D.

Office Location: 456A Mendel Science Center Telephone: (610) 5019-4820

Website: <https://www1.villanova.edu/villanova/artsci/astronomy.html>

About. The APS Department offers a major in Astronomy & Astrophysics, leading to a Bachelor of Science degree. The major combines rigorous academic preparation with a strong research component, which usually culminates in the presentation of original research results at national astronomical conferences. The program is designed to prepare students for graduate studies in astronomy and related fields. In addition, and due to the strong and balanced Liberal Arts education, the Astronomy & Astrophysics major provides outstanding preparation for careers in science journalism and science education, as well as for essentially any technically based career.

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MINOR (24 credits)

A minor is open to all students and requires 9 courses and a minimum of 24 credits.

Required Courses:

Item #	Title	Credits
AST 2120	Sun and Stars	3
AST 2121	Solar System Astronomy	3
AST 2122	Understanding Our Universe	3
MAT 1500	Calculus I	4
MAT 1505	Calculus II	4
	Astrophysics Physics Elective	3
	Astrophysics Elective	2-3
	Astrophysics Elective	2-3

Biology - Biology, B.S.

Chair: Dennis D. Wykoff, Ph.D.

Office Location: 147 Mendel Science Center Telephone: 610-519-4830

Website: <https://www1.villanova.edu/villanova/artsci/biology.html>

About. Biology is a broad-based program designed for students interested in life sciences. The program fulfills entry requirements for medical and other allied health programs as well as for graduate work in many areas of biology and related fields. The program also provides excellent preparation for careers in health sciences, research, and/or education.

MAJOR (37 credits)

The biology major requires a minimum of 70 credits in biology and cognate courses with at least five biology laboratory courses at the 3000-level and higher.

Program Notes: Combined BS/MS in Biology: Five-year double degree program.

Seedepartmental website: <https://www1.villanova.edu/villanova/artsci/biology.html> for details regarding admission, requirements, the program of study, etc.

Research opportunities: Undergraduate majors may opt to work with faculty to complete undergraduate research either informally or more formally in a senior or honors thesis project.

Required Courses:

Item #	Title	Credits
BIO 2105	General Biology I	4
BIO 2106	General Biology II	4
BIO 3351	Genetics	4
BIO 5300	Biology Capstone	3
	Organismal Biology Elective	4
	Ecology/Evolutionary/Population Biology Elective	4
	Cellular/Molecular Biology Elective	4
	Upper-Level BIO Lab Elective	4
	Upper-Level BIO Lab Elective	4
	Additional BIO Elective	2

Required Cognate Courses:

Item #	Title	Credits
CHM 1151	General Chemistry I	4
CHM 1103	General Chemistry Lab I	1
CHM 1152	General Chemistry II	4
CHM 1104	General Chemistry Lab II	1
CHM 2211	Organic Chemistry I	3
CMT 2201	Organic Chemistry Lab 1	1
CHM 2212	Organic Chemistry II	3
CHM 2202	Organic Chemistry Lab II	1
MAT 1312	Biocalculus	4
	Biology Math Elective	3
PHY 1100	General Physics I	3
PHY 1101	General Physics I Lab	1

Required Cognate Courses:

<u>Item #</u>	<u>Title</u>	<u>Credits</u>
PHY 1102	General Physics II	3
PHY 1103	General Physics II Lab	1
AST 2120	Sun and Stars	3
AST 2121	Solar System Astronomy	3
AST 2122	Understanding Our Universe	3
MAT 1500	Calculus I	4
MAT 1505	Calculus II	4
	Astrophysics Physics Elective	3
	Astrophysics Elective	2-3
	Astrophysics Elective	2-3

Biology Minor

Chair: John M. Olson, Ph.D.

Office Location: 147 Mendel Science Center Telephone: 610-519-4832

Website: <https://www1.villanova.edu/villanova/artsci/biology.html>.

About. Biology is a broad-based program designed for students interested in life sciences. The program fulfills entry requirements for medical and other allied health programs as well as for graduate work in many areas of biology and related fields. The program also provides excellent preparation for careers in health sciences, research, and/or education.

MINOR (23 credits)

A minor is open to all students and requires a minimum of 23 credits in Biology. Minors must complete at least 12 of their Biology credits at Villanova and achieve a minimum GPA of 2.0.

Required Courses:

<u>Item #</u>	<u>Title</u>	<u>Credits</u>
BIO 2105	General Biology I	4
BIO 2106	General Biology II	4
	Upper-Level BIO Lab Elective	4
	Upper-Level BIO Lab Elective	4
	Upper-Level BIO Lab Elective	4
	Upper-Level BIO Elective	3-4

Business - Business Minor Options

Villanova School of Business

Associate Director Business Minor Programs: Patricia (Trish) Burdo Office

Location: Bartley Hall Rm. 1054 [The Clay Center at VSB]

Telephone: (610) 519-5532

Website:

<https://www1.villanova.edu/university/business/academics/undergraduate-programs/degrees/non-business-students.html>

About. There are two options for CLAS students to earn a business minor: The Academic Year Business Minor and the Summer Business Institute. Students considering either of these programs should meet with their primary academic advisor before applying to determine if/how business minor courses may apply to degree or major requirements. Completion of either program may allow students to pursue a discipline-specific business minor or enroll in other VSB courses; VSB approval is required and additional pre-requisite coursework may be necessary.

Academic Year Business Minor. The Academic Year Business Minor is designed for full-time undergraduates enrolled in other Villanova colleges. This traditional-year program typically requires four semesters to complete; required courses are part of the VSB core curriculum and are taken alongside VSB students. The admission process for the program is competitive; students must attend an info session prior to applying and are admitted on a yearly basis after spring semester grades are posted. The deadline for applications is May 1; program and application requirements can be found at business.villanova.edu, search Business Minors for Non- Business Students.

Summer Business Institute (SBI). The Summer Business Institute (SBI) is a 10 week, full-time, 16-credit program created exclusively for non-business majors. SBI, using a cohort-based model, is an accelerated program designed to be completed in one summer. The admission process for the program is competitive; students are admitted on a rolling basis. The application period is December 1 – April 15. Additional information, including the application, can be found at business.villanova.edu/sbi

Center for Irish Studies - Irish Studies Minor

Director: Joseph Lennon, Ph.D.

Office Location: Saint Augustine Center, 105E Telephone: (610) 519-4647

Website: <https://www1.villanova.edu/villanova/artsci/irishstudies.html>

About. Irish Studies explores the history and culture of the Irish people in Ireland and the Irish diaspora from a variety of disciplines—art, economics, folklore, history, language, literature, music, philosophy political science, and theater. Students can major in Irish Studies through the department of Global Interdisciplinary Studies, culminating in a rigorous multidisciplinary thesis. The minor is open to students from all colleges and can be completed by taking five courses, two required and three electives, either on campus and abroad. For students in the College of Arts and Science, two four-credit courses in the Irish language may be taken to complete the College language requirement.

The Center works with local organizations and hosts a lively series of readings, academic lectures, performances, and receptions, also welcoming cultural, political, and business leaders to campus for networking. Interested students may also study in Ireland in a Semester Abroad program or through the Villanova Summer in Ireland Program or apply for one of several professional internships abroad or in Philadelphia. Details are available through the Center for Irish Studies.

MINOR (15 credits)

A minor is open to all students. Completion of the required English course and History course is a pre- requisite for beginning the minor.

Required Courses:

<u>Item #</u>	<u>Title</u>	<u>Credits</u>
	ENG 2450 or ENG 2500	3
	HIS 3216 or HIS 2286	3
	IS Elective	3
	IS Elective	3
	IS Elective	3

MAJOR (21 credits). The Department of Global Interdisciplinary Studies (GIS) offers a major with a specialization in Irish Studies, please see [that page](#) for detailed requirements of the major.

Chemistry. The Department of Chemistry at Villanova University offers masters and bachelors degrees, including an American Chemical Society accredited degree program for undergraduates. Our faculty actively conduct research in diverse areas such as environmental chemistry, protein biochemistry, fuel cell research, and computational chemistry. We recognize that undergraduate research provides a unique opportunity to work closely alongside a faculty mentor, gaining an experience that extends far beyond typical classroom learning, and we encourage all undergraduates to participate in undergraduate research.

Biochemistry, B.S.

Program Directors: Jennifer Palenchar, PhD., James W. Wilson, PhD

Office Location: Mendel Science Center Rm. 215

Telephone: (610) 519-4840

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/biochemistry.html>

About. Biochemistry is an interdisciplinary major requiring comprehensive coursework in both Biology and Chemistry. The biological relevance of chemical concepts is stressed throughout the curriculum.

Students are encouraged to pursue one of the many available research experiences.

MAJOR (69 credits)

Students are accepted into the major as incoming freshmen, or upon consultation with a program director when achieving a 2.0 or better in required courses.

Program Notes: The student is required to continue their Physics course sequence in the second semester following their first semester of Physics. Students may substitute the sequence of MAT 1500 and MAT 1505 for MAT 1312 and STAT 1313 with permission from the program directors. The Biochemistry program offers three mechanisms for participation in research by undergraduate majors. Competitive fellowships for 8-10 weeks of summer research are funded by University, government, or industrial sources. Recipients of these fellowships carry out a research program under the direction of a faculty member. Students may also enroll in research mentored by a faculty member for academic credit during the school year, which fulfills the elective requirement in the relevant department (CHM 4801, 4802, 4803, 4851, 4851 or BIO 6509, 6609). Students may also volunteer in research laboratories. In each case, students should discuss participation in research with Program of Biochemistry faculty members.

Required Courses:

Item #	Title	Credits
CHM 1000	Profesl Development Sem	1
CHM 1151	General Chemistry I	4
CHM 1103	General Chemistry Lab I	1
CHM 1152	General Chemistry II	4
CHM 1104	General Chemistry Lab II	1
	CHM 2201/2211 or CHM 3201/3212	4

Required Courses:

Item #	Title	Credits
	CHM 2202/2212 or chm 3202/3212	4
CHM 3417	Biophysical Chemistry	3
CHM 3514	Bioanalytical Chemistry	3
CHM 3503	Bioanalytical Chem Lab	1
CHM 4603	Biochem Tech. and Pract.	1
CHM 4604	Biochem Tech. and Pract.	1
CHM 4621	Biochemistry I: Structure	3
CHM 4622	Biochemistry II: Metabolism	3
CHM 4623	Biochemistry III	3
BIO 2105	General Biology I	4
BIO 3351	Genetics	4
BIO 4505	Molecular Biology	4

Required Courses:

Item #	Title	Credits
MAT 1500	Calculus I	4
MAT 1505	Calculus II	4
	PHY 2410/2411 or PHY 1100/1101	4
	PHY 2412/2413 or PHY 1102/1103	4
	Approved Chemistry Elective	3
	Approved Biology Elective	3

Chemistry, B.S.

Chair: Kevin P.C. Minbiole, Ph.D.

Office Location: Mendel Science Center Rm. 215A Telephone: (610) 519-4840

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/chemistry.html>

About. The Department of Chemistry at Villanova University offers masters and bachelor's degrees, including an American Chemical Society accredited degree program for undergraduates. Our faculty actively conduct research in diverse areas such as environmental chemistry, protein biochemistry, fuel cell research, and computational chemistry. We recognize that undergraduate research provides a unique opportunity to work closely alongside a faculty mentor, gaining an experience that extends far beyond typical classroom learning, and we encourage all undergraduates to participate in undergraduate research.

MAJOR (68 credits)

The Chemistry major, certified by the American Chemical Society, provides comprehensive classroom and laboratory training in all areas of chemistry. Students receive extensive training in laboratory techniques using modern chemical instrumentation.

Required Courses:

Item #	Title	Credits
CHM 1000	Profesl Development Sem	1
CHM 1000	Profesl Development Sem	1
CHM 1311	Inorganic Chemistry I	3

Required Courses:

Item #	Title	Credits
CHM 1301	Inorganic Chemistry Lab I	2
CHM 1512	Quantitative Analysis	3
CHM 1502	Quant Anal Lab	2
CHM 3211	Organic Chemistry I	3
CHM 3201	Organic Chemistry Lab I	2
CHM 3212	Organic Chemistry II	3
CHM 3202	Organic Chemistry Lab II	2
CHM 3311	Inorganic Chemistry II	3

Required Courses:

Item #	Title	Credits
CHM 3301	Inorganic Chemistry Lab II	2
CGN 3413	Molecular Thermodynamics	3
CHM 3405	Physical Chem Lab II	2
CHM 3412	Quantum Chemistry	3
CHM 3404	Physical Chem Lab I	2
CHM 3511	Instrumental Analysis	3
CHM 3501	Instrumental Analysis Lab	2
	CHM 4611 or 4610: Biochemistry	3
MAT 1500	Calculus I	4
MAT 1505	Calculus II	4
PHY 2410	University Phy: Mechanics	3
PHY 2411	Lab: Mechanics	1
PHY 2412	Univ Physics: Elec & Mag	3
PHY 2413	Lab: Elec & Magnetism	1
	CHM Elective	3
	CHM Elective	3
	CHM Lab Elective	1

Chemistry with Biochemistry Concentration, B.S.

Chair: Kevin P.C. Minbiole, Ph.D.

Office Location: Mendel Science Center Rm. 215A Telephone: (610) 519-4840

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/chemistry.html>

About. The Department of Chemistry at Villanova University offers masters and bachelors degrees, including an American Chemical Society accredited degree program for undergraduates. Our faculty actively conduct research in diverse areas such as environmental chemistry, protein biochemistry, fuel cell research, and computational chemistry. We recognize that undergraduate research provides a unique opportunity to work closely alongside a faculty mentor, gaining an experience that extends far beyond typical classroom learning, and we encourage all undergraduates to participate in undergraduate research.

MAJOR (80 credits)

Required Courses:

Item #	Title	Credits
CHM 1000	Profesl Development Sem	1
CHM 1000	Profesl Development Sem	1
CHM 1311	Inorganic Chemistry I	3
CHM 1301	Inorganic Chemistry Lab I	2
CHM 3311	Inorganic Chemistry II	3
CHM 3301	Inorganic Chemistry Lab II	2
CHM 1512	Quantitative Analysis	3

Required Courses:

Item #	Title	Credits
CHM 1502	Quant Anal Lab	2
CHM 2211	Organic Chemistry I	3
CHM 2201	Organic Chemistry Lab I	1
CHM 3211	Organic Chemistry I	3
CHM 3201	Organic Chemistry Lab I	2
CHM 3412	Quantum Chemistry	3
CHM 3404	Physical Chem Lab I	2
CGN 3413	Molecular Thermodynamics	3
CHM 3405	Physical Chem Lab II	2
CHM 3511	Instrumental Analysis	3
CHM 3501	Instrumental Analysis Lab	2
CHM 4621	Biochemistry I: Structure	3
CHM 4603	Biochem Tech. and Pract.	1
CHM 4622	Biochemistry II: Metabolism	3
CHM 4604	Biochem Tech. and Pract II	1
	Biochemistry Biology Courses	8
PHY 2410	University Phy: Mechanics	3
PHY 2411	Lab: Mechanics	1
PHY 2412	Univ Physics: Elec & Mag	3
PHY 2413	Lab: Elec & Magnetism	1
MAT 1500	Calculus I	4
MAT 1505	Calculus II	4
	Molecular Based Biology Course	4
	Biochemistry Chemistry Elective	3

Biochemistry Minor

Program Directors: Jennifer Palenchar, PhD., James W. Wilson, PhD Office

Location: Mendel Science Center Rm. 215, Telephone: (610) 519-4840

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/biochemistry.html>

About. Biochemistry is an interdisciplinary major requiring comprehensive coursework in both Biology and Chemistry. The biological relevance of chemical concepts is stressed throughout the curriculum. Students are encouraged to pursue one of the many available research experiences.

MINOR (23 credits). The Biochemistry minor requires 23 credits not including pre-requisite coursework.

Program Notes: The Biochemistry program offers three mechanisms for participation in research by undergraduate majors. Competitive fellowships for 8-10 weeks of summer research are funded by University, government, or industrial sources. Recipients of these fellowships carry out a research program under the direction of a faculty member. Students may also enroll in research

mentored by a faculty member for academic credit during the school year, which fulfills the elective requirement in the relevant department (CHM 4801, 4802, 4803, 4851, 4851 or BIO 6509, 6609). Students may also volunteer in research laboratories. In each case, students should discuss participation in research with Program of Biochemistry faculty members.

Chemistry courses listed below for the minor may have additional pre-requisite not listed on this page.

Required Courses:

Item #	Title	Credits
BIO 2105	General Biology I	4
BIO 3351	Genetics	4
BIO 4505	Molecular Biology	4
CHM 4603	Biochem Tech. and Pract.	1
CHM 4604	Biochem Tech. and Pract. II	1
CHM 4621	Biochemistry I: Structure	3
CHM 4622	Biochemistry II: Metabolism	3
CHM 4623	Biochemistry III	3

Chemistry Minor. Students must complete a year of general chemistry (or equivalent), a year of organic chemistry, two additional chemistry courses with associated laboratories, and one additional chemistry course (7 courses total). All course prerequisites and co-requisites apply¹. Biochemistry majors need to complete 2 CHM courses at the 3000 level or above that are not otherwise required for the biochemistry degree to fulfill the requirements for the Chemistry minor.

Program notes: Or with approval of the Chemistry Advisor.

Required Courses:

Item #	Title	Credits
	General Chemistry Requirement	8
	Organic Chemistry Requirement	8
	CHM Elective & Lab	8
	Upper-division Chemistry Course	3

Chinese Language - Chinese Language and Cultural Studies Minor

Coordinator: HaiLin Zhou, Ph.D. Office

Location: Gary Hall Rm. 036

Telephone: (610) 519-6302, Website:

<https://www1.villanova.edu/villanova/artsci/global/criticallangs/chinese.html>

About. The Chinese Language and Cultural Studies program opens the way to the study of various elements of Chinese life. Chinese Language and Cultural Studies includes the rich heritage of novels, short stories, poetry, culinary art, film and the Chinese classics. Chinese Language and Cultural Studies represents a cutting-edge intellectual experience that provides its minors with a real advantage in critiquing, understanding, and navigating the global landscape.

MINOR (28 credits or 6 courses)

The Chinese Language and Cultural Studies minor is open to all students and requires 6 courses (28 credits), four courses in language and two in electives.

Program Notes:

Other culture-based courses with ASN attribute found across disciplines also qualify for the cultural studies elective.

Advanced Chinese (CHI 1131) course and the Translation (CHI 1151) course may count as electives if the student has fulfilled the required language courses.

Pertinent GIS team-taught courses and contents courses from other departments with ASN (Chinese) attribute also qualify for CHI electives.

Courses on Chinese/China taken as part of a study abroad will be counted.

An internship related to Chinese Studies may be counted as an independent study.

Required Courses:

Item #	Title	Credits
	Chinese Language Course	3-6
	Chinese Language Course	3-6
	Chinese Language Course	3-6
	Chinese Language Course	3-6

Required Courses:

Item #	Title	Credits
	Chinese Cultural Studies Elective	3
	Chinese Cultural Studies Elective	3

Classical Studies - Classical Studies, B.A.

Program Director: Valentina DeNardis, Ph.D. Office Location: Saint Augustine Center Rm. 30,4 Telephone: (610) 519-6165

Website: <https://www1.villanova.edu/villanova/artsci/classical.html>

About. The Classical Studies Program explores the cultures of ancient Greece and Rome, from the beginnings of Greek civilization to the fall of the Roman empire. Our program is interdisciplinary, embracing the study of classical languages, literatures, history, art and archaeology, philosophy and religion. The program offers courses which may satisfy requirements for the Core Curriculum of the College of Liberal Arts and Sciences.

MAJOR (30 credits). The major requires 10 courses and at least 30 credits.

Required Courses:

- Select one course of three or more credits: CLA 2021 or GRK 1000:9999 or LAT 1000:9999 (3 cr)
- Select eight courses of three or more credits from among the following: AAH 1101, CLA 1000:9999, GRK 1000:9999, LAT 1000:9999, or any course with the CLST attribute (24 cr)
- CLA 6001: Senior Classics Capstone (3 cr)

FIVE YEAR B.A./M.A PROGRAM. The five-year B.A./M.A. program allows exceptional students to complete a bachelor's and a master's degree in Classical Studies in five years. In the last year of undergraduate study students take three graduate courses that count towards both their undergraduate and graduate degrees.

Classical Studies Minor

Program Director: Valentina DeNardis, Ph.D.

Office Location: Saint Augustine Center Rm. 304

Telephone: (610) 519-6165

Website: <https://www1.villanova.edu/villanova/artsci/classical.html>

About. The Classical Studies Program explores the cultures of ancient Greece and Rome, from the beginnings of Greek civilization to the fall of the Roman empire. Our program is interdisciplinary, embracing the study of classical languages, literatures, history, art and archaeology, philosophy and religion. The program offers courses which may satisfy requirements for the Core Curriculum of the College of Liberal Arts and Sciences.

MINOR (18 credits)

The minor requires a minimum of 18 credits. Language classes are not required.

Required Courses:

- Six courses in any combination of courses in the classical languages and/or courses taught in English on classical civilization. (18 cr) This includes:
- Courses with the Subject codes GRK, LAT, CLA
- Courses with the CLST attribute

Cognitive Science - Cognitive Science Minor

Program Director: Joseph Toscano, Ph.D. Office Location: Tolentine Hall Rm M52

Telephone: (610) 519-4755

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/cognitive-science.html>

About. The Cognitive Science Program offers a course of study in the interdisciplinary field of Cognitive Science, bringing together perspectives from cognitive psychology, computer science, philosophy, and biology to understand how intelligent systems function. An undergraduate concentration and an undergraduate minor are available to all students in undergraduate colleges of the University. The program is particularly well-suited to students majoring in Psychology, Computing Sciences, Philosophy, and Cognitive & Behavioral Neuroscience.

MINOR (15 credits)

Program Notes:

- The five courses used to fulfill the Minor must span at least three different disciplines.
- Choose two courses from the first three listed items. Select three electives from the list. Five courses in total are required to fulfill the minor requirements.
- Special topics, research, and independent study electives (BIO 6409, BIO 6509, CSC 5900, CSC 5930, CSC 5993, PHI 2990, PHI 4990, PSY 2900, PSY 5900) require approval of the Cognitive Science Program.
- For courses that have prerequisites, Cognitive Science students should apply to have the prerequisites waived. Decisions will be made on a case-by-case basis by the course instructor, or in some cases, the Director of the Cognitive Science Program, after considering the particular student's background. In most cases, it is expected that the prerequisites will be able to be waived.
- Students may take CSC 1010 in place of CSC 1051 for the purpose of fulfilling the elective.

Required Courses:

Item #	Title	Credits
PHI 4610	Philosophy of Mind	3
PSY 4500	Cognitive Psychology	3
	CSC 4500 or CSC 4510 or MSE 2400	3-4
	Cognitive Science Electives	6

Cognitive Science Concentration

Program Director: Joseph Toscano, Ph.D. Office Location: Tolentine Hall Rm M52

Telephone: (610) 519-4755

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/cognitive-science.html>

About. The Cognitive Science Program offers a course of study in the interdisciplinary field of Cognitive Science, bringing together perspectives from cognitive psychology, computer science, philosophy, and biology to understand how intelligent systems function. An undergraduate concentration and an undergraduate minor are available to all students in undergraduate colleges of the University. The program is particularly well-suited to students majoring in Psychology, Computing Sciences, Philosophy, and Cognitive & Behavioral Neuroscience.

Concentration Required Courses (21 credits)

Program Notes:

- Students may take CSC 1010 to fulfill the CSC 1051 requirement.
- Special topics, research, and independent study electives (BIO 6409, BIO 6509, CSC 5900, CSC 5930, CSC 5993, PHI 2990, PHI 4990, PSY 2900, PSY 5900) require approval of the Cognitive Science Program.
- For courses that have prerequisites, Cognitive Science students should apply to have the prerequisites waived. Decisions will be made on a case-by-case basis by the course instructor, or in some cases, the Director of the Cognitive Science Program, after considering the particular student's background. In most cases, it is expected that the prerequisites will be able to be waived.

Required Courses:

Item #	Title	Credits
CSC 1051	Algorithms & Data Struc I	4
	CSC 4500 or CSC 4510 or MSE 2400	3-4
PHI 4610	Philosophy of Mind	3

Required Courses:

Item #	Title	Credits
PSY 4500	Cognitive Psychology	3
CGS 5900	Cognitive Science Seminar	3
	Cognitive Science Electives	9

Communication - Communication, B.A.

Chair: Heidi Rose, Ph.D.

Office Location: Garey Hall 028

Telephone: (610) 510-4750

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/communication.html>

About. Communication shapes who we are, both individually and socially. We in the Communication Department believe our future depends upon our communication with one another. The study of Communication in the liberal arts tradition focuses on the understanding and use of symbols that create meaning in multiple communicative contexts—global and local, personal and professional, in-person and mediated. The discipline of Communication is grounded in ancient rhetorical traditions and is influenced by contemporary intellectual, artistic and technological developments. Our program integrates theory and practice, so that skills-based courses build upon communication principles, concepts, insights, and research techniques. Our mission, then, is to produce well-rounded communicators who will speak eloquently and listen actively; think critically, creatively, and ethically; and write clearly and strategically. Our graduates are placed in top graduate programs and law schools, as well as prepared to build careers in industries from public relations and marketing to media production and print/broadcast/digital journalism. Whether in corporate or nonprofit careers, serving their communities, or engaged in further academic study, our graduates illustrate that students of Communication are uniquely equipped to make a difference locally and globally, in their lives and in the lives of others.

MAJOR (36 credits). To Declare the Major: Enrollment in COM 1000 and COM 1100.

Specializations: Students may choose either to design their own major specialization or will choose one (or more) of the following specializations: Public Relations & Advertising, Journalism, Organizational Communication, Media Studies, Media Production, Rhetorical Studies, Performance Studies, and Interpersonal & Intercultural Communication. With or without a specialization, students must cover three different areas in their six 3000-level courses. A complete listing of specialization requirements and courses is available on the departmental Web page or in the departmental office. Some specializations require Communication majors to complete internships, which, if completed for credit, will be used to satisfy free electives for the *College of Liberal Arts and Sciences*.

Program Notes:

Only two courses may be transferred to count towards the COM major. Students who plan to study abroad should take COM 1000, 1100, and at least one 2000- level course before going abroad.

Required Courses:

Item #	Title	Credits
COM 1000	Surv of Communication Studies	3
COM 1100	Public Speaking	3
	COM 2000-level Theories	6
	COM 3000-level Advanced Topics	18
	COM 4001 or COM 4002	3
	COM Capstone	3

Communication Minor

Chair: Heidi Rose, Ph.D.

Office Location: Garey Hall 028

Telephone: (610) 510-4750

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/communication.html>

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MINOR (15 credits)

Students within the College of Liberal Arts & Sciences or Villanova School of Business can minor in Communication by taking five courses.

Program Notes:

Only one course may be transferred to count toward the COM minor.

Students wishing to minor in Communication from within CLAS or other Villanova colleges/schools are encouraged to contact the Communication Department to learn about ways to build a minor that will complement their major programs of study.

Required Courses:

Item #	Title	Credits
COM 1000	Surv of Communication Studies	3
	COM 2000-level Elective	3
	COM 3000-level Elective	3
	Additional COM Electives	6

Comprehensive Science - Comprehensive Science, B.S.

Program Director: Robert Styer, PhD

Office Location: Saint Augustine Center Rm. 372

Telephone: (610) 519-4845

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/comprehensive-science.html>

About. The Comprehensive Science program allows students interested in the quantitative and physical and life sciences to get broad based competency to a full spectrum of scientific concerns and practices. Our majors gain both hands-on lab skills and quantitative aptitudes through a broad range of courses in mathematics, physical and life sciences, and computer science. The program equips students with the analytical, interpretive, and explanatory skill sets that enable their understanding of the scientific world. The flexible program allows students to create a tailored interdisciplinary program that can prepare the student for a variety of professions or graduate studies. Our majors go on to medical schools, dental schools, and other health related graduate programs, as well as careers as financial analysts, lab researchers, computing, pharmaceutical, and other careers that require a science/math background.

Program Notes:

Chemistry majors who transfer to Comprehensive Science (BSC) may count CHM 1311/CHM 1301 in place of the CHM 1151/ CHM 1103 requirement listed below. Chemistry majors who transfer to Comprehensive Science (BSC) may count CHM 1521/CHM 1502 in place of the CHM 1152/CHM 1104 requirement listed below. A student can only get credit for one class from this list: CSC 2300, PSY 2000, STAT 1313, 4310.
MAJOR (65 credits)

Required Courses:

Item #	Title	Credits
BIO 2105	General Biology I	4
BIO 2106	General Biology II	4
CHM 1151	General Chemistry I	4
CHM 1103	General Chemistry Lab I	1
CHM 1152	General Chemistry II	4
CHM 1104	General Chemistry Lab II	1
CSC 1051	Algorithms & Data Struc I	4
MAT 1500	Calculus I	4

Required Courses:

Item #	Title	Credits
MAT 1505	Calculus II	4
	Approved Physics with Labs	8
	Science Major Statistics	3
	Approved Math or Computing Elective	3
	Science Major Capstone	3
	Approved Science Electives	18

Computing Sciences

Chair: Daniel Joyce, Ph.D.

Office Location: Mendel Science Center Rm. 161

Telephone: (610) 519-7307

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/computing-sciences.html>

About. The Department of Computing Sciences seeks to provide outstanding education, to advance scholarship, and to engage in activities that benefit society as a whole, in accordance to the University mission. The Department aims to equip students with a solid foundation in computing theory, and to prepare them for lifelong independent learning and innovative thinking in a constantly changing discipline. Its faculty members strive to maintain professional currency, and to involve students and colleagues in their research investigations. These endeavors support the University mission to transmit, pursue, and discover knowledge in an atmosphere of collegiality in the university community.

Supported by a liberal arts education, the Department seeks to develop the total person, sensitive to social and ethical concerns affected by the computing discipline, and committed to addressing the needs of a diverse and interconnected modern society.

Computer Science, B.S.

Chair: Daniel Joyce, Ph.D.

Office Location: Mendel Science Center Rm. 161 Telephone: (610) 519-7307

Website

<https://www1.villanova.edu/university/liberal-arts-sciences/programs/computing-sciences.html>

About. Computer science students explore a broad spectrum of computing technologies and concepts. Our courses provide a thorough foundation in the principles and practices of computing, paving the way for successful careers and ongoing graduate studies. Our students also learn skills in communication and the scientific, mathematical, and engineering principles that support the computing disciplines.

The Department of Computing Sciences seeks to provide outstanding education, to advance scholarship, and to engage in activities that benefit society as a whole, in accordance to the University mission. The Department aims to equip students with a solid foundation in computing theory, and to prepare them for lifelong independent learning and innovative thinking in a constantly changing discipline. Its faculty members strive to maintain professional currency, and to involve students and colleagues in their research investigations. These endeavors support the University mission to transmit, pursue, and discover knowledge in an atmosphere of collegiality in the university community.

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MAJOR (73 credits)

Program Notes: Combined BS/MS in Computer Science or Software Engineering: Five-year double degree program. See departmental website for details regarding admission, requirements, the program of study, etc.

Required Courses:

Item #	Title	Credits
CSC 1990	Enrichment Sem in Computing	1
CSC 1051	Algorithms & Data Struc I	4
CSC 1052	Algorithms & Data Struc II	4
CSC 1300	Discrete Structures	3
CSC 1700	Analysis of Algorithms	3
CSC 1800	Organ of Prog Languages	3

Required Courses:

Item #	Title	Credits
CSC 2053	Platform Based Computing	3
	CSC 2300 or STAT 4310	3
CSC 2400	Computer Systems I	3
CSC 2405	Computer Systems II	3
CSC 4170	Theory of Computation	3
CSC 4480	Principles of Database Systems	3
CSC 4700	Software Engineering	3
CSC 4790	Senior Projects	3
PHI 2180	Computer Ethics	3
MAT 1500	Calculus I	4
MAT 2400	Linear Algebra for Computing	4
	Natural Science with Lab	8
	CSC Elective	3
	CSC Elective	3
	CSC Elective	3
	CSC Elective	3

Computer Science Minor

Chair: Daniel Joyce, Ph.D.

Office Location: Mendel Science Center Rm. 161 Telephone: (610) 519-7307

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/computing-sciences.html>

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Supported by a liberal arts education, the Department seeks to develop the total person, sensitive to social and ethical concerns affected by the computing discipline, and committed to addressing the needs of a diverse and interconnected modern society.

MINOR (25 credits). The computer science minor consists of 8 courses from the requirements for the computer science major. The minor provides a strong foundation in computer science suitable for application to any other major field of endeavor.

Required Courses:

Item #	Title	Credits
	CSC 1051 or ECE 1620	3-4
	CSC 1052 or ECE 2620	4
	CSC 1300 or MAT 2600	3
CSC 1700	Analysis of Algorithms	3
	CSC 2400, ECE 2042, or ECE 2430	3
CSC 4480	Principles of Database Systems	3
	CSC Elective	3
	CSC Elective	3

Cybersecurity Minor

Chair: Daniel Joyce, Ph.D.

Office Location: Mendel Science Center Rm. 161 Telephone: (610) 519-7307

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/computing-sciences.html>

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as a whole, in accordance to the University mission. The Department aims to equip students with a solid foundation in computing theory, and to prepare them for lifelong independent learning and innovative thinking in a constantly changing discipline. Its faculty members strive to maintain professional currency, and to involve students and colleagues in their research investigations. These endeavors support the University mission to transmit, pursue, and discover knowledge in an atmosphere of collegiality in the university community.

Supported by a liberal arts education, the Department seeks to develop the total person, sensitive to social and ethical concerns affected by the computing discipline, and committed to addressing the needs of a diverse and interconnected modern society.

MINOR (29 credits). Offered jointly through the Department of Computing Sciences and the Electrical and Computer Engineering Department in the College of Engineering, the Cybersecurity Minor provides students with a solid foundation in the principles of cybersecurity. There are multiple paths to the Minor, but all require at least two courses of computer programming, one course of discrete structures, one course of networks, four courses related to information security, and a capstone project course.

Criminology - Criminology, B.A.

Program Director: Kelly Welch, Ph.D.

Office Location: 274 Saint Augustine Center Telephone: (610) 519-7048

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/sociology-criminology/undergraduate-programs.html>

About. The Criminology major is an interdisciplinary program designed to provide students with an understanding of the causes, social functions, nature and application of criminal law, and societal reactions to criminal law. Criminologists believe that people's actions are strongly influenced by the conditions and situations in which they live, work, and play. Everybody makes decisions, but we recognize and study how social structures and institutions affect and constrain those decisions. Our goal as researchers is to expose and analyze the impacts of those circumstances on human decisions, societies, and opportunities. Methodologically, we incorporate multiple perspectives and analytical approaches to help create a more holistic understanding of our society. Rather than a technical program which focuses on applied skills, our program emphasizes the justice component. Our mission as teachers is to empower students to think critically and rigorously about individuals and societies.

Through our diverse offerings on local, regional, national and global social processes, we strive to create more complete human beings with a keen sense of humanity, social justice, and appropriate social policy.

MAJOR (33 credits)

- To declare the Major, a student must have completed Introduction to Criminology (CRM 1001), with a “C+” or higher or have a minimum GPA of 3.0. The Major consists of 33 credits. A student must allow three full semesters after the declaration of the Major to complete all requirements. One of the Criminology electives for the Major can be satisfied by an internship for credit with approval from the Program Director, provided that the student has at least 15 credits toward the Major.

Program Notes:

A student taking an internship in a field setting in the second semester of their junior year or during their senior year should consult with the Program Director.

Required Courses:

Item #	Title	Credits
CRM 1001	Introduction to Criminology	3
CRM 5100	Criminological Theory	3
SOC 5300	Data Analysis – Social Scientist	3
SOC 5400	Applied Research in Soc	3
CRM 6500	Senior Seminar	3
	CRM Elective	3
	CRM Elective	3
	CRM Elective	3
	CRM Elective	3
	SOC Elective	3

Criminology Minor

Program Director: Kelly Welch, Ph.D.

Office Location: 274 Saint Augustine Center Telephone: (610) 519-7048

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/sociology-criminology/undergraduate-programs.html>

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Criminologists believe that people’s actions are strongly influenced by the conditions and situations in which they live, work, and play. Everybody makes decisions, but we recognize and study how social structures and institutions affect and constrain those decisions. Our goal as researchers is to expose and analyze the impacts of those circumstances on human decisions, societies, and opportunities. Methodologically, we incorporate multiple perspectives and analytical approaches to help create a more holistic understanding of our society. Rather than a technical program which focuses on applied skills, our program emphasizes the justice component. Our mission as teachers is to empower students to think critically and rigorously about individuals and societies.

Through our diverse offerings on local, regional, national and global social processes, we strive to create more complete human beings with a keen sense of humanity, social justice, and appropriate social policy.

MINOR (15 credits). A Minor is open to all students and requires 5 courses and 15 credits. Courses taken on a satisfactory/ unsatisfactory basis cannot be used to satisfy requirements for the Minor. Minors cannot receive Criminology credit for an internship. Students wishing to earn a Minor in Criminology must fill out an application form available in the office.

Program Notes: Only one course may be transferred from another university.

Required Courses:

Item #	Title	Credits
CRM 1001	Introduction to Criminology	3
	CRM Elective	3
	CRM Elective	3
	CRM Elective	3
	CRM Elective	3

Economics

Chair: Erasmus Kersting, Ph.D.

Associate Chair: Mary Kelly, Ph.D.

Office Location: 2014 Bartley Hall Telephone: 610-519-4370 [Website](#)

About. Economics is the science that studies the behavior of social systems – such as markets, legislatures, corporations, and families – in allocating scarce resources. It is a discipline which brings together the diverse worlds of business, social science, and public policy. The study of economics is an excellent preparation leading to many career options.

Economics majors are well positioned to be the future managers and leaders in both the private and public sectors. The study of economics at the undergraduate level provides a solid basis for graduate study in the social sciences and for professional study in business administration, law, public administration, and in the health sciences.

Economics, B.A.

About. Economics addresses how individuals and firms make decisions in a world of scarcity and uncertainty while also presenting opportunities to learn how to analyze the performance and interaction of national economies. The curriculum is designed to promote the development of quantitative skills as well as written and verbal communication abilities so students are equipped to critically examine the effects of economic factors on market participants in the private and public sectors. Because of the growing complexity of the global

economy, there is an increase in the demand for individuals who can provide and communicate quantitative analysis of economic variables and their effects on forecasting sales, managing costs, allocating budgets, and choosing investment options.

MAJOR (33 credits). Students majoring in Economics should have good analytical skills along with good writing skills. Economic graduates find employment in banking, finance, retail, government, planning, and forecasting. Also, Economics is a perfect preparation for Law School.

Program Notes: A minimum grade of B in ECO 1001 & 1002 are required to declare the economics major. Students not meeting these requirements should discuss with the Chair/ Associate Chair of the Economics Department.

Calculus (which can be used to satisfy the core) is a prerequisite for ECO 2101 and ECO 2102.

Required Courses:

Item #	Title	Credits
ECO 1001	Intro to Micro	3
ECO 1002	Intro to Macro	3
	MAT 1235 or STAT 1430	3
ECO 2101	Macro-Econ Theory	3
ECO 2102	Micro-Econ Theory	3
ECO 3137	Intro to Econometrics	3
	Economics Senior Seminar	3
	ECO Elective 3000 or higher	3
	ECO Elective 3000 or higher	3
	ECO Elective 3000 or higher	3
	ECO Elective 3000 or higher	3

Economics Minor

Chair: Erasmus Kersting, Ph.D.

Office Location: 2014 Bartley Hall Telephone: 610-519-4370 [Website](#)

About. Economics addresses how individuals and firms make decisions in a world of scarcity and uncertainty while also presenting opportunities to learn how to analyze the performance and interaction of national economies. The curriculum is designed to promote the development of quantitative skills as well as written and verbal communication abilities so students are equipped to critically examine the effects of economic factors on market participants in the private and public sectors. Because of the growing complexity of the global economy, there is an increase in the demand for individuals who can provide and communicate quantitative analysis of economic variables and their effects on forecasting sales, managing costs, allocating budgets, and choosing investment options.

MINOR (18 credits). A minor is open to all students and requires 6 courses and 18 credits.

Program Notes:

Calculus (which can be used to satisfy the core) is a prerequisite for ECO 2101 and ECO 2102.

Required Courses:

Item #	Title	Credits
ECO 1001	Intro to Micro	3
ECO 1002	Intro to Macro	3
ECO 2101	Macro-Econ Theory	3
ECO 2102	Micro-Econ Theory	3
	ECO Elective 3000 or higher	3
	ECO Elective 3000 or higher	3

Education and Counseling

Chair: Teresa G. Wojcik, Ph.D.

Office Location: 302 Saint Augustine Center Telephone: 610-519-4620

Website: <https://www1.villanova.edu/villanova/artsci/education.html>

About. The Education and Counseling Department undergraduate offerings include a Major in Secondary Education, two different Minor in Education programs, a Minor in Counseling, and a combined [BA/MA in Education](#). The Secondary Education degree has been approved by the Pennsylvania Department of Education (PDE) to recommend candidates for Level I Certification in order to teach in grades 7 through 12 in Pennsylvania's public schools. Faculty in the department are highly engaged in both theoretical and practical research related to education and counseling.

Education, B.A.

Chair: Teresa G. Wojcik, Ph.D.

Undergraduate Program Director: Christa S. Bialka, Ed.D. Office Location: 302 Saint Augustine Center

Telephone: 610-519-8103

Website: <https://www1.villanova.edu/villanova/artsci/education.html>

About. The Education and Counseling Department undergraduate offerings include a Major in Secondary Education, two different Minor in Education programs, a Minor in Counseling, and a combined BA/MA in Education. The Secondary Education degree has been approved by the Pennsylvania Department of Education (PDE) to recommend candidates for Level I Certification in order to teach in grades 7 through 12 in Pennsylvania's public schools. Faculty in the department are highly engaged in both theoretical and practical research related to education and counseling.

MAJOR (34 credits + Concentration). In addition to demonstrating competence within their chosen academic discipline, as well as fulfilling the College of Arts and Sciences' core curriculum requirements, students participate in a wide variety of classroom field experiences. Such experiences are carefully selected and supervised and always appropriate to both the academic and professional competence of the students.

Program Notes: Students majoring in Education need to select one concentration from those listed below. The credit total for the B.A. will vary depending upon the concentration.

To be accepted into the major, students must have a 3.0 GPA, 6 credits in English and 6 credits in math completed prior to the start of their junior year.. Candidates for the major should apply as soon as possible and no later than sophomore year

Required Courses:

Item #	Title	Credits
	EDU 2201 or EDU 2202	3
EDU 2300	Research Seminar in Education	3
EDU 3000	Prof. Development in Education	1
EDU 3251	Psych of Teaching & Learning	3
EDU 3263	Diversity and Inclusion	3
EDU 3264	Intro to Disability Studies	3
EDU 4245	Literacy & Eng Lang Learning	3
EDU 4290	Philosophy of Education	3
EDU 4291	Student Teaching	9
EDU 4292	Senior Seminar	3

Select Concentration (43-65 Credits)

Required Courses:

Item #	Title	Credits
	Teaching Biology Concentration	65
	Teaching Chemistry Concentration	60
	Teaching English Concentration	43
	Teaching French Concentration	45
	Teaching Latin Concentration	48
	Teaching Mathematics Concentration	43
	Teaching Physics Concentration	52
	Teaching Social Studies Concentration	48
	Teaching Spanish Concentration	48

Counseling Minor

Chair: Krista Malott, Ph.D.

Office Location: 302 Saint Augustine Center Telephone: (610) 519-8103

Website: <https://www1.villanova.edu/villanova/artsci/education.html>

About. The Education and Counseling Department undergraduate offerings include a Major in Secondary Education, two different Minor in Education programs, a Minor in Counseling, and a combined [BA/MA in Education](#). The Secondary Education degree has been approved by the Pennsylvania Department of Education (PDE) to recommend candidates for Level I Certification in order to teach in grades 7 through 12 in Pennsylvania's public schools. Faculty in the department are highly engaged in both theoretical and practical research related to education and counseling.

COUNSELING MINOR (15 credits). The Minor in Counseling exposes students to knowledge of the field of counseling and the counseling process, evidence-based therapeutic practices, and the application of counseling skills. The minor is not intended to replace graduate level professional training, but to prepare students for entry level helping careers, for advanced graduate work, or to complement coursework from a variety of majors.

Program Notes: Students interested in declaring the counseling minor must have a minimum GPA of 3.0

Required Courses:

Item #	Title	Credits
COU 2000	Introduction to Counseling	3
	COU 3500 or COU 3700	3
	COU 3100 or 3 COM 5300 Workshops	3
	COU 2500 or COU 3400	3
	COU 3600 or COU 3700	3

Education Minor

Program Director: Christa Bialka, PhD

About. The Education Minor is 15 credits. The minor in Education does not qualify one to teach in Pennsylvania public schools. If a student wishes to continue toward teacher certification after graduation, they will need to complete the coursework and student teaching required to apply for Pennsylvania certification. Students interested in obtaining teacher certification should speak to Education Undergraduate Program Director, Dr. Christa Bialka, to create a plan for moving forward.

Program Notes: Electives other than those listed below may be taken with approval of Chairperson. Please contact [Rita Siciliano](#) for more information on electives and registering for graduate level courses.

All 8000 level courses need approval of Chairperson.

Required Courses:

Item #	Title	Credits
	EDU 2201 or EDU 2202	3
EDU 3251	Psych of Teaching & Learning	3
EDU 3263	Diversity and Inclusion	3
EDU 4290	Philosophy of Education	3
	EDU Minor Elective	3

Education Policy & Leadership Minor

Chair: Christopher Schmidt, Ph.D.

Office Location: 302 Saint Augustine

Center Telephone: 610-519-4620

Website: <https://www1.villanova.edu/villanova/artsci/education.html>

About.

The Education and Counseling Department undergraduate offerings include a Major in Secondary Education, two different Minor in Education programs, a Minor in Counseling, and a combined [BA/MA in Education](#). The Secondary Education degree has been approved by the Pennsylvania Department of Education (PDE) to recommend candidates for Level I Certification in order to teach in grades 7 through 12 in Pennsylvania's public schools. Faculty in the department are highly engaged in both theoretical and practical research related to education and counseling.

EDUCATION POLICY & LEADERSHIP MINOR (15 credits). A minor in Educational Policy and Leadership is designed to help students develop an awareness of global issues in education in order to learn how educational institutions can transform and be transformed by society through school policy and leadership. A minor in Educational Policy and Leadership requires at least 15 credits. The minor in Educational Policy and Leadership does not lead to Pennsylvania teacher certification or qualify one to teach in Pennsylvania public schools.

Program Notes: Other courses may count as an elective by approval of Chairperson.

All 8000 level courses need approval of Chairperson.

Required Courses:

Item #	Title	Credits
EDU 3264	Intro to Disability Studies	3
EDU 3277	Urban Education	3
	EDU 3253 or EDU 8654	3
	Education Policy & Leadership Electives	6

Teaching Certification

Chair: Teresa G. Wojcik, Ph.D., Department of Education and Counseling Program

Coordinator: [Nancy Franz, M.Ed.](#)

Office Location: 302 Saint Augustine Center Telephone: 610-519-4620

Website:

<https://www1.villanova.edu/villanova/artsci/education/undergrad/secondaryed.html>

About. Villanova University's secondary teacher education program is approved by the Pennsylvania Department of Education as satisfying the requirements for teacher certification in 14 subject areas. Students with majors in departments other than Education and Counseling may be admitted to the teacher education program upon the approval of the Undergraduate Committee. Students admitted to the teacher education program must complete the same requirements as Education majors, including courses in ELL, special education, and student teaching.

Student Teaching is normally taken in the second semester of the senior year. Exploratory-Arts students who may be interested in Secondary Teacher Certification should stop by the Office of Education and Counseling, 302 St. Augustine Center for the Liberal Arts, as soon as possible.

Students enrolled in the Teacher Education Program will have their work reviewed each semester by a department committee to determine progress and professional development for certification. Students must achieve a 3.0 overall GPA and successful completion of the PAPA tests (or satisfaction of the *SAT/ ACT exemption) before they are permitted to do student teaching. Students who do not achieve the required cumulative average by spring semester senior year will not be allowed to continue in the education major.

AREAS OF CERTIFICATION: Biology, Chemistry, Citizenship, Communication, English, French, General Science, Italian, Latin, Mathematics, Physics, Spanish, and Social Studies.

Upon successful completion of the major required certification courses, the special education workshops, and ELL courses, and the PAPA, and Praxis II exams, the student will be eligible for certification.

*SAT/ACT exemption: Students who receive a score of at least a 1550 on the SAT, with a minimum score of 500 in each of the three testing sections OR a student who receives at least a score of 23 on the ACT test, will be exempt from taking the PAPA basic skills tests.

English - English, B.A.

Chair: Heather Hicks, Ph.D.

Office Location: 402 Saint Augustine Center Telephone: 610-519-4630

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/english.html>

About. The English department believes that skillful, self-aware reading, writing, and thinking provide a foundation for meaningful living. We seek to develop forms of analysis and expression that are both critical and creative and that help

us comprehend the multiple cultural practices and values of the twenty-first century. Villanova English majors acquire a broad understanding of Anglophone literary history as well as familiarity with the major genres of the tradition. A department of accomplished scholars, we focus on undergraduate education and make our majors the center of pedagogy. While preserving the value of literature as a cultural form, we cultivate in our students the analytical skills necessary for negotiating today's rapidly changing world.

MAJOR (33 credits). English majors take a range of courses, from required courses (chosen from a number of possibilities) that provide a sense of the historical range and diversity of literature in English to electives covering contemporary writers, film, creative writing, and many more topics. Students can also form tracks (such as Professional Writing, World Literature, or Race and Ethnicity) within the major. English courses are particularly well-suited to helping students become better readers, writers, and analytical thinkers; because of those skills, and because of the breadth of literature, English courses are valuable in all aspects of our lives.

Program Notes: There is no prerequisite to the major, but we strongly recommend that you take English 2101 (The British Literary Tradition I) early, since it will introduce you to writers, texts, and issues that are crucial to most subsequent courses.

Required Courses:

Item #	Title	Credits
	British/Irish Lit Pre-1800 Courses	6
	Post-1800 Literature Elective	6
ENG 2250	Ways of Reading: Lit Analysis	3
ENG 5000	Senior Seminar	3
	English Electives 1800 and above	15

CREATIVE WRITING MINOR. The Creative Writing Program offers an interdisciplinary Minor in Creative Writing to students across the university. The goal of the program is to support students in their creative writing endeavors. The Creative Writing Program seeks to offer students the opportunity to augment their degree by taking courses that will awaken their imagination, develop their skills as creative writers and thinkers, and foster greater empathy towards the experiences of others.

The Creative Writing Program also seeks to create a "space of creativity" within the university. Through courses and workshops, students will interact with and learn from their peers as well as published novelists, poets, playwrights and screenwriters.

Interested freshmen may wish to take part in our [Creative Writing Community](https://www1.villanova.edu/university/student-life/residence-life/communitas.html). <https://www1.villanova.edu/university/student-life/residence-life/communitas.html>

MINOR (15 credits)

Program Notes: Students must take ENG 2003: Introduction to Creative Writing as a prerequisite to the minor. Students will also complete an Independent Study (Completion of a collection of stories or poems, or a novel) upon approval.

Required Courses:

Item #	Title	Credits
ENG 2003	Intro to Creative Writing	3
ENG 4690/ 4691/4692	Amer. Lit. & Cult. After 1900	3
	Creative Writing Electives 1	9

English Minor

Program Contact: Mary Mullen, Ph.D, Associate Professor

Office Location: Saint Augustine Center, Room 402

About. The English department believes that skillful, self-aware reading, writing, and thinking provide a foundation for meaningful living. We seek to develop forms of analysis and expression that are both critical and creative and that help us comprehend the multiple cultural practices and values of the twenty-first century. Villanova English majors acquire a broad understanding of Anglophone literary history as well as familiarity with the major genres of the tradition. A department of accomplished scholars, we focus on undergraduate education and make our majors the center of pedagogy. While preserving the value of literature as a cultural form, we cultivate in our students the analytical skills necessary for negotiating today's rapidly changing world.

ENGLISH MINOR (15 credits). To complete an English Minor, you take five English courses (15 credits) numbered 1800 or higher, with the exception of 1975, which cannot be counted. To declare an English Minor, students should complete the application for an English Minor located on the website:

<https://www1.villanova.edu/content/dam/villanova/artsci/english/undergraduate/Minor%20form.pdf>

Required Minor Courses

- Non-American Anglophone Literature (3 cr) – Select 1 Class from: 3000:3999
- Literature of the Americas (3 cr) – Select 1 Class from: 4000:4999
- English Electives (9 cr) – Select 3 Classes from: ENG 1842:5000 (with the exception of ENG 1975)

Program Notes: At least three of these courses must be taken at Villanova.

Course numbers from 2000 to 4999 refer only to the subjects that the course cover, and do not reflect the level or difficulty.

Ethics Minor

Program Director: Mark Doorley, Ph.D. Associate Director: Brett T. Wilmot, Ph.D.

Office Location: 104 Saint Augustine Center Telephone: 610-519-4692

Website: <https://www1.villanova.edu/villanova/artsci/ethics.html>

About. Here at Villanova University, we believe that at the heart of every human endeavor we find assumptions about what it means to live well as human beings in the world and in relationships with others—human, non-human, and divine. The aim of the Ethics Program is to provide students with opportunities to explore these assumptions, to understand their origins in our great intellectual traditions, and to engage them critically using methods and resources both theological and philosophical.

MINOR (18 credits). Villanova University prides itself on presenting an educational alternative built around a clear ethical core, in particular, the moral teachings of the Catholic intellectual tradition. The ethics minor allows students to pursue the study of ethics explicitly and in depth as part of their undergraduate education. The minor contributes directly to the mission of the university. A focus on a particular set of questions/ issues within ethics not only benefits students’ intellectual and moral development and contributes to the public perception of the university but also has tangible benefits for students as they apply for graduate studies, fellowships, and job on completion of their studies.

Program Notes

- Students choose a focus of study and pursue courses listed below, in consultation with their Ethics faculty advisor
- Each semester the upper-level courses that will count toward the minor will be marked in the Master Schedule, in the Attributes section with “Fulfills ethics minor requirement.” These will also be listed on the Ethics Program website. It is important for students to be sure they take the upper level courses that are affiliated with their focus of study.
- The ETH 30xx courses will be planned five semesters in advance so that students will know what will be offered in future semesters, for planning purposes. This information will be available on the Ethics Program website.
- Students are able to do service work in lieu of one of their elective courses in all focus areas. The service must be related to their focus of study, amount to at least 60 hours of service, and not be credit-bearing or paid work. Students will register for ETH 4975 Ethics Independent Study (3 cr) and must complete their service and associated assignments in that same semester. Students must get approval of their service site from the Associate Director of the Ethics Program.

Required Courses:

Item #	Title	Credits
ETH 2050	The Good Life: Eth & Cont Prob	3
	Upper-Level Ethics Elective	3
	Philosophical Ethics Course	4
	Theological Ethics Course	3
	Two Electives in Chosen Focus	6

French and Francophone Studies - French & Francophone Studies, B.A.

Program Director: Étienne Achille, Ph.D. Office Location: 343 Saint Augustine

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/romance-languages-literatures/french-francophone-studies.html>

About. The French and Francophone Studies Program (FFS) of the Department of Romance Languages and Literatures offers a major and a minor. FFS emphasizes language skills and offer interdisciplinary studies in the faculty's area of specialization: French literature and civilization; the evolution of Western thought in France; the cultures and literatures of the Francophone world; and stylistics and translation. The influence of French language and literature crosses centuries as well as geographic boundaries.

Francophone studies is a dynamic and rapidly expanding field, focusing on the literatures, politics, history, cultures, language, identities and related studies of French- Speaking countries. Villanova's interdisciplinary FFS have been designed to provide students with a thorough grounding in the history, politics, cultural production, sociolinguistics, post-colonial experiences, and development of Francophone Countries.

MAJOR (31 credits). The Major consists of 31 FFS credits above the intermediate level (FFS 1122), including courses in literature, cinema, and cultural studies. Students may obtain up to 6 credits through the Villanova summer program in Lille, France, and up to 9 credits through the semester program.

Program Notes: One RLL course taught in English with FFS attribute may be accepted for the major. FFS 3971 to be taken in conjunction with any 3000-level course.

Required Courses:

Item #	Title	Credits
	FFS 1138 or FFS 1140	3
	FFS 2220 or FFS 2221	3
FFS 3971	Directed Research in FFS	3
	FFS 3000+ elective	3
	FFS Electives	21

French and Francophone Studies Minor

Program Director: Étienne Achille, Ph.D.

Office Location: 343 Saint Augustine Center Telephone: 610-519-5468

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/romance-languages-literatures/french-francophone-studies.html>

About. The French and Francophone Studies Program (FFS) of the Department of Romance Languages and Literatures offers a major and a minor. FFS emphasizes language skills and offer interdisciplinary studies in the faculty's

area of specialization: French literature and civilization; the evolution of Western thought in France; the cultures and literatures of the Francophone world; and stylistics and translation. The influence of French language and literature crosses centuries as well as geographic boundaries.

Francophone studies is a dynamic and rapidly expanding field, focusing on the literatures, politics, history, cultures, language, identities and related studies of French- Speaking countries. Villanova's interdisciplinary FFS have been designed to provide students with a thorough grounding in the history, politics, cultural production, sociolinguistics, post-colonial experiences, and development of Francophone Countries.

MINOR (15 credits). A minor is open to all students and requires 5 courses above intermediate level (FFS 1122).

Program Notes: No course in English may count for the minor.

Required Courses:

Item #	Title	Credits
FFS 1131	Conversation and Composition I	3
FFS 1132	Conversation and Composition II	3
	FFS Elective	3
FFS 3971	FFS Elective	3
	FFS Elective	3

Gender and Women's Studies - Gender and Women's Studies Minor

Co-Directors: Travis Foster, Ph.D. and Melissa Hodges, Ph.D.

Office Location: 488 Saint Augustine Center

Website: <https://www1.villanova.edu/villanova/artsci/gws.html>

About. Gender and Women's Studies encourages critical analysis of gender and sexuality at local, national, and global levels—now and in the past. Our curriculum brings feminist and queer theory into conversation with fields of study across the University, from history to sociology to global finance, helping students discover new alternatives for thinking about the problems of the world and the contributions of its people. As teachers, we are profoundly influenced by feminist models of collaborative learning and shared authority. We recognize our students and their life experiences as sources of vital expertise, and we help them find a voice, a sense of community, and a purpose as agents of social change.

MINOR (18 credits). The minor is open to all students and requires 2 courses and 4 electives for a total of 18 credits. Student may choose their four electives from any GWS-attributed courses that are available in a variety of disciplines.

Required Courses:

Item #	Title	Credits
GWS 2050	Introduction to Gender Studies	3
GIS 5000	Special Topics	1
	GWS Elective	3
	GWS Elective	3
	GWS Elective	3
	GWS Elective	3

Geography and the Environment - Environmental Studies, B.A.

Chair: Nathaniel Weston, Ph.D.

Program Director: Peleg Kremer, Ph.D.

Office Location: Suite G67, Mendel Science Center Telephone: 610-519-3336

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/geography-environment.html>

About. The Department of Geography and the Environment offers B.A. degrees in Geography and Environmental Studies, and a B.S. in Environmental Science. The department also offers minors in Geography and Sustainability Studies. The department's overarching objective is to integrate the disciplines of geography and environmental science to seek an understanding of human and environmental patterns, the processes that produce those spatial patterns, and salient human and environmental problems that face modern society. The department has three teaching and five research labs; and the department has a full suite of state-of-the-art geospatial software and scientific research equipment.

MAJOR (57 credits). The B.A. in Environmental Studies program focuses on the interface between environmental science and relevant social sciences, including public policy, political science, law, economics, sociology, and planning. Towards this end, the program's graduates will have a fundamental understanding of the biological, chemical, and physical principles that underlie the structure and function of the natural and physical environments of the Earth coupled with a foundation in the social sciences that underlie the relationships between humans, as individuals and/or societies, and the natural and physical environments of Earth. The program is founded on the principle that the social sciences – both as a bodies of knowledge and as the bases for structuring human societal norms and behaviors – must be applied to assess and to address the direct and indirect influences of human activities on the integrity of the Earth's systems.

Program Notes:

- Consider course offerings with environmental content when selecting the twelve free electives.
- BIO 3105 or MAT 4310 may fulfill the requirement for GEV 3300.
- GEV 6006 must be taken a total of three times prior to graduation.

- Students must select one track in either the Environmental Sustainability Concentration or Environmental Management Concentration, as listed below.

Required Courses:

Item #	Title	Credits
GEV 2001	Prof Dev in Geo and Env	1
GEV 1050	Environmental Science 1	4
GEV 1051	Environmental Science II	4
GEV 3300	Stats. In Environmental Sci.	3

Required Courses:

Item #	Title	Credits
GEV 4700	Geographic Information Systems	4
GEV 4310	Environmental Issues Seminar	3
GEV 3004	Geographies Envrnl Justice	3
GEV 6005	Senior Research Seminar	1
GEV 6006	Research Colloquium	0
GEV 6006	Research Colloquium	0
GEV 6006	Research Colloquium	0
	Environmental Social Sciences and Humanities Elective	0
	GEV Independent Study Requirement	3-6

SELECT A CONCENTRATION

Required Courses:

Item #	Title	Credits
	Environmental Sustainability Concentration	31-32
	Environmental Management Concentration	31

Geography, B.A.

Chair: Nathaniel Weston, Ph.D.

Program Director: Stephen Strader, Ph.D.

Office Location: Suite G67, Mendel Science Center Telephone: 610-519-3336

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/geography-environment.html>

About. The Department of Geography and the Environment offers B.A. degrees in Geography and Environmental Studies, and a B.S. in Environmental Science. The department also offers minors in Geography and Sustainability Studies. The department's overarching objective is to integrate the disciplines of geography and environmental science to seek an understanding of human and environmental patterns, the processes that produce those spatial patterns, and salient human and environmental problems that face modern society. The department has three teaching and five research labs; and the department has a full suite of state-of-the-art geospatial software and equipment.

MAJOR (37 credits). The B.A. in Geography provides a well-rounded and useful

education and marketable skills to students with interests in the spatial patterns of society and the environment. It focuses on the interactions of humans with the natural and physical environments of Earth from a special perspective. Towards this end, the program's graduates will have a fundamental understanding of the human social dynamics and physical patterns and processes at the Earth's surface, such as globalization, climatic variation and natural disasters within the context of places, landscapes, and regions. Graduates will also be trained in the use of geospatial technologies as tools in addressing many modern concerns. The program is founded on the principle that geographical knowledge of place, space, and scale can provide essential insights into contemporary social and environmental issues and variation in human cultures and behaviors, and promotes the idea that such insight is critical to managing the Earth at local, regional and global scales.

Program Notes: A 1000-level topics course may substitute for either GEV 1002 or GEV 1003.

Required Courses:

Item #	Title	Credits
GEV 1002	Freshman Peer Mentoring	0
GEV 1003	Geo. Of a Globalizing World	3
GEV 1750	Geo-Techniques	4
GEV 2001	Sophomore Peer Mentoring	0

Required Courses:

Item #	Title	Credits
GEV 2500	Global Change in Local Places	3
GEV 4700	Geographic Information Systems	4
GEV 6005	Senior Research Seminar	1
GEV 6006	Research Colloquium (taken 3x)	0
	GEV Independent Study Requirement	3-6
	GEV Regional Perspectives Course	3
	GEV Geospatial Technology Course	3
	Geography Elective (Above 2000)	3
	Geography Elective (Above 2000)	3
	Geography Elective (Above 2000)	3

Environmental Science, B.S.

Chair: Nathaniel Weston, Ph.D.

Program Director: Kabindra Shakya, Ph.D.

Office Location: Suite G61, Mendel Science Center Telephone: 610-519-3336

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/geography-environment.html>

About. The Department of Geography and the Environment offers B.A. degrees in Geography and Environmental Studies, and a B.S. in Environmental Science. The department also offers minors in Geography and Sustainability Studies. The

department's overarching objective is to integrate the disciplines of geography and environmental science to seek an understanding of human and environmental patterns, the processes that produce those spatial patterns, and salient human and environmental problems that face modern society. The department has three teaching and five research labs; and the department has a full suite of state-of-the-art geospatial software and scientific research equipment.

MAJOR (70 credits). The B.S. in Environmental Science Program provides the technical background necessary for understanding the biological, chemical, and physical aspects of the environment. It focuses on the application of biological, chemical and physical principals to understanding the natural and physical environments of the Earth. Towards this end, the program's graduates will have an understanding of and appreciation for the processes and interactions that occur both within and between the atmosphere, the biosphere, the lithosphere, and the hydrosphere. The program is founded on the principle that science – both as a body of knowledge and as a process that is grounded in intellectual inquiry and the scientific method – must be applied to assess the direct and indirect influences of human activities on the integrity of the Earth's systems.

Program Notes:

- Consider course offerings with environmental content when selecting the ten free electives.
- BIO 3105 or MAT 4310 may fulfill the GEV 3300 requirement.
- MAT 1310 may fulfill the MAT 1500 requirement.
- GEV 6006 must be taken a total of 3 times prior to graduation.

Required Courses:

Item #	Title	Credits
GEV 2001	Prof Dev in Geo and Env	1
GEV 1050	Environmental Science I	4
GEV 1051	Environmental Science II	4
GEV 1750	Geo-Techniques	4
GEV 2310	Environmental Chemistry	4
	Stats. For Environmental Science	3
GEV 4700	Geographic Information Systems	4
GEV 4310	Environmental Issues Seminar	3
CHM 1151	General Chemistry I	4
CHM 1103	General Chemistry Lab I	1
PHY 1100	General Physics	3
PHY 1101	General Physics I Lab	1
MAT 1500	Calculus I	4
GEV 6005	Senior Research Seminar	1
GEV 6006	Research Colloquium	0

Required Courses:

Item #	Title	Credits
GEV 6006	Research Colloquium	0
GEV 6006	Research Colloquium	0
	GEV Independent Study Requirement	3-6
	GEV Lab Elective	4
	GEV Lab Elective	4
	GEV Science and Technology Elective	3-4
	GEV Science and Technology Elective	3-4
	GEV Science and Technology Elective	3-4
	GEV Science and Technology Elective	3-4
	GEV Policy and Management Elective	3
	GEV Policy and Management Elective	3

Geography Minor

Chair: Nathaniel Weston, Ph.D.

Program Director: Stephen Strader, Ph.D.

Office Location: Suite G67, Mendel Science Center Telephone: 610-519-3336

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/geography-environment.html>

About. The Department of Geography and the Environment offers B.A. degrees in Geography and Environmental Studies, and a B.S. in Environmental Science. The department also offers minors in Geography and Sustainability Studies. The department's overarching objective is to integrate the disciplines of geography and environmental science to seek an understanding of human and environmental patterns, the processes that produce those spatial patterns, and salient human and environmental problems that face modern society. The department has three teaching and five research labs; and the department has a full suite of state-of-the-art geospatial software and equipment.

MINOR (16 credits). The geography minor is open to all students and requires 5 courses and 16 credits, and it is designed for students who wish to deepen and broaden their knowledge of the world with a distinctive yet flexible program of courses encompassing the relationship between the environment and society. The minor enables students to develop a coherent strategy for understanding and explaining the manner in which people and the Earth interact.

Required Courses:

Item #	Title	Credits
	GEV 1002 or GEV 1003	3
GEV 4700	Geographic Information Systems	4
	GEV Regional Perspectives Course	3
	Geography Elective (Above 2000)	3

Required Courses:

Item #	Title	Credits
	Geography Elective (Above 2000)	3

Global Interdisciplinary Studies. The Department of Global Interdisciplinary Studies (GIS) provides students with a tripartite of skills, knowledge, and values that foster critical thinking, problem solving, and preparation for responsible global citizenship. Students gain an understanding of global studies, acquiring the know-how in global and digital literacy, cultural diversity and intercultural competences, interdisciplinary research, and a passion for social justice, nurtured in experiential learning.

All students must choose one specialization from the sections listed below. The Department of Global Interdisciplinary Studies also offers minors in the following programs: Arabic Language and Cultural Studies, Chinese Language and Cultural Studies, Japanese Language and Cultural Studies, Russian Language and Cultural Studies. Visit these individual pages to view requirements.

MAJOR (31-34 credits). The central dynamic of the GIS major is the emphasis on the interdisciplinary and the global through a specialization in one of the following areas and thematic studies, namely: Africana Studies, Arab & Islamic Studies, Asian Studies, Cultural Studies, Irish Studies, Latin American Studies, and Russian Area Studies. A student may also consider an Individually Designed Specialization after meeting some requirements, including meeting with the Chair of the department. Each specialization emphasizes the core tenets of the major: Interdisciplinary research, global impact through the local, and the application of knowledge to world affairs.

Seven Area Specializations: GIS offers seven specializations in interdisciplinary areas of study – Africana Studies, Arab and Islamic Studies, Asian Studies, Cultural Studies, Irish Studies, Latin American Studies, and Russian Area Studies. The additional requirements of each specialization are listed below. Students must indicate their specialization at the time of declaring the GIS major.

Individually Designed Specialization:

A student may opt to design a 15-credit specialization of their choosing. This specialization must be proposed at the declaration of the major, with a clear rationalization for all selected courses. The proposal must be approved by a faculty mentor and the Department Chair and include at least three courses regularly offered at Villanova University.

Program Notes: For GIS 5011, Team-taught Topics Student takes two different topics, the first of which counts as the Junior Research Seminar for the Major (6 credits).

Required Courses:

Item #	Title	Credits
GIS 2000	Intro to Global Interd Studies	3
GIS 5011	GIS Select	3

GIS 5011	GIS Select	3
GIS 6500	Capstone I: Research	3
GIS 6600	Special Topics Study Abroad	1

Africana Studies, B.A. (GIS)

Chairperson: Chiji Akoma, Ph.D.

Office Location: 36 Garey Hall

Telephone: 610-519-6302

Website: <https://www1.villanova.edu/villanova/artsci/global.html>

GIS: Africana Studies (GAFR) = Required Specialization Courses:

Six courses with the AFR attribute for a minimum of 18 credits, including the courses listed below.

Program Notes:

- For GIS 5011, Team-taught Topics Student takes two different topics, the first of which counts as the Junior Research Seminar for the Major (6 credits).
- Courses taken as part of a study abroad program may be counted
- A GIS 5011 with AFR attribute (or other course approved by the program director) may be counted among the six courses, as long as the two required GIS 5011 courses for the GIS major have been fulfilled.
- Student must also fulfill the GIS requirements listed above.

Required Courses:

Item #	Title	Credits
AFR 3000	Constructs of Blackness	3
	GIS Africana Electives	15

Arab and Islamic Studies, B.A. (GIS)

Chairperson: Chiji Akoma, Ph.D.

Office Location: 36 Garey Hall

Telephone: 610-519-6302

Website: <https://www1.villanova.edu/villanova/artsci/global.html>

GIS: Arab and Islamic Studies (15 credits) (GAIS)

Program Notes: Courses taken as part of a study abroad may be counted.

For GIS 5011, Team-taught Topics Student takes two different topics, the first of which counts as the Junior Research Seminar for the Major (6 credits).

Student must also fulfill the GIS requirements listed above.

Required Courses:

Item #	Title	Credits
	GAIS Language Requirement	6-10
	GAIS Political Science Course	3
	GAIS History Course	3
	GAIS Theology Course	3

Chairperson: Chiji Akoma, Ph.D.

Office Location: 36 Garey Hall

Telephone: 610-519-6302

Website: <https://www1.villanova.edu/villanova/artsci/global.html>

GIS: Asian Studies (15 credits) (GAS)

Program Notes: For GIS 5011, Team-taught Topics Student takes two different topics, the first of which counts as the Junior Research Seminar for the Major (6 credits).

- Courses taken as part of a study abroad may be counted.
- One internship course may be counted.
- Coursework must be done on more than one country in Asia and in more than one discipline.
- Student must also fulfill the GIS requirements listed above.

Required Courses:

Item #	Title	Credits
	Asian Studies Language Requirement	9-13
	Asian Studies Major Electives	6

Cultural Studies, B.A. (GIS)

Chairperson: Chiji Akoma, Ph.D.

Office Location: 36 Garey Hall

Telephone: 610-519-6302

Website: <https://www1.villanova.edu/villanova/artsci/global.html>

Program Notes: For GIS 5011, Team-taught Topics Student takes two different topics, the first of which counts as the Junior Research Seminar for the Major (6 credits). Courses taken as part of a study abroad may be counted. One internship course may be counted. Student must also fulfill the GIS requirements listed above.

GIS: Cultural Studies (18 credits) (GCST). Six courses with the CST attribute for a minimum of 18 credits.

Required Courses:

Item #	Title	Credits
CST 2100	Intro. To Cultural Studies	3

Gender and Women's Studies, B.A. (GIS)

Co-Directors: Travis Foster, Ph.D. and Melissa Hodges, Ph.D.

Office Location: 488 Saint Augustine Center

Telephone: 610-519-450

Website: <https://www1.villanova.edu/villanova/artsci/gws.html>

About. Gender and Women's Studies encourages critical analysis of gender and sexuality at local, national, and global levels—now and in the past. Our curriculum brings feminist and queer theory into conversation with fields of study across the University, from history to sociology to global finance, helping students discover new alternatives for thinking about the problems of the world and the contributions of its people. As teachers, we are profoundly influenced by feminist models of collaborative learning and shared authority. We recognize our students and their life experiences as sources of vital expertise, and we help them find a voice, a sense of community, and a purpose as agents of social change.

GIS: Gender and Women's Studies (30 credits). The major in Gender and Women's Studies provides an interdisciplinary and comparative approach to deepen students' understandings of the history, culture, religion, politics, literature, and society.

Students sign up for the major and choose their specialization through the Department of Global Interdisciplinary Studies. The GIS chair and GWS Academic Director will work closely with each student to develop their individual interests, abilities, and career goals while fulfilling the requirements for the major.

Required Courses:

Item #	Title	Credits
GIS 2000	Intro to Global Interd Studies	3
GWS 2050	Introduction to Gender Studies	3
	GWS 3000 or PHI 2420	3
GWS 5000	Integrating Seminar	3
	GWS Elective	3
	GWS Elective	3
	GWS Elective	3

Required Courses:

Item #	Title	Credits
	GWS Elective	3
	GWS Elective	3
	GWS Elective	3

GIS: Irish Studies (15 credits) (GIST)

Required Specialization Courses: Five courses with the IS attribute for a minimum of 15 credits, of which the following must be included:

Program Notes: Courses taken as part of a study abroad may be counted. One internship course may be counted.

Required Courses:

Item #	Title	Credits
	IS 1121 or IS 2222	3
	ENG 2450 or ENG 2500	3
	HIS 3216 or HIS 2286	3
	IS Elective	3
	IS Elective	3

GIS: Russian Area Studies (18 credits) (GRAS)

Six courses for a minimum of 18 credits, of which the following must be included: Required Specialization Courses:

- Two Russian language courses at the intermediate (6 cr)
- Four Courses with the RAS attribute for a minimum of 12 credits (12 cr)

Program Notes: Up to two courses taken as part of a study abroad program may be counted. Student must also fulfill the GIS requirements listed above.

GIS: Latin American Studies (18 credits) (GLAS)

Six courses with a minimum of 18 credits, of which the following must be included:

- Required Specialization Courses:
- Four courses with the LAS attribute (12 cr minimum)
- Two advanced Spanish courses above 1122 (6 cr)

Program Notes: Courses taken as part of a study abroad may be counted. One internship course may be counted. Student must also fulfill the GIS requirements listed above.

Irish Studies, B.A. (GIS)

Chairperson: Chiji Akoma, Ph.D.

Office Location: 36 Garey Hall

Telephone: 610-519- 6302

Website: <https://www1.villanova.edu/villanova/artsci/global.html>

About. The Department of Global Interdisciplinary Studies (GIS) provides students with a tripartite of skills, knowledge, and values that foster critical thinking, problem solving, and preparation for responsible global citizenship. Students gain an understanding of global studies, acquiring the know-how in

global and digital literacy, cultural diversity and intercultural competences, interdisciplinary research, and a passion for social justice, nurtured in experiential learning.

MAJOR (31-34 credits)

Program Notes: Courses taken as part of a study abroad may be counted. One internship course may be counted. For GIS 5011, Team-taught Topics Student takes two different topics, the first of which counts as the Junior Research Seminar for the Major (6 credits).

Required Courses:

Item #	Title	Credits
GIS 2000	Intro to Global Interd Studies	3
GIS 5011	GIS Select	3
GIS 5011	GIS Select	3

Required Courses:

Item #	Title	Credits
GIS 6500	Capstone I: Research	3
GIS 6600	Capstone 2: Thesis	3
GIS 5000	Special Topics	1

Required Courses:

Item #	Title	Credits
	Study Abroad	
	IS 1121 or IS 2222	3
	ENG 2450 or ENG 2500	3
	HIS 3216 or HIS 2286	3
	IS Elective	3
	IS Elective	3

Latin American Studies, B.A. (GIS)

Chairperson: Chiji Akoma, Ph.D.

Office Location: 36 Garey Hall

Telephone: 610-519- 6302

Website: <https://www1.villanova.edu/villanova/artsci/global.html>

Abstract. The Department of Global Interdisciplinary Studies (GIS) provides students with a tripartite of skills, knowledge, and values that foster critical thinking, problem solving, and preparation for responsible global citizenship. Students gain an understanding of global studies, acquiring the know-how in global and digital literacy, cultural diversity and intercultural competences, interdisciplinary research, and a passion for social justice, nurtured in experiential learning.

MAJOR (31-34 credits)

Program Notes: Courses taken as part of a study abroad may be counted. One internship course may be counted. For GIS 5011, Team-taught Topics Student takes two different topics, the first of which counts as the Junior Research Seminar for the Major (6 credits).

Required Courses:

Item #	Title	Credits
GIS 2000	Intro to Global Interd Studies	3
GIS 5011	GIS Select	3
GIS 5011	GIS Select	3
GIS 6500	Capstone I: Research	3
GIS 6600	Capstone 2: Thesis	3
GIS 5000	Special Topics	1
	LAS Language Requirement	6
	LAS Electives	12
	Study Abroad	

Peace and Justice, B.A. (GIS)

Chair: Kathryn Getek Soltis, S.T.L., Ph.D.

Office Location: 106 Corr Hall

Telephone: 610-519-6849

<https://www1.villanova.edu/villanova/artsci/peaceandjustice.html>

About. The interdisciplinary curriculum of the Center for Peace and Justice Education is rooted in Villanova’s Augustinian tradition of education in the service of peace and social justice, with particular emphasis on the poor and marginalized in society. Students are prepared to understand the essential elements of a moral and just society, reflect on models for socially responsible resolution of injustice and conflict, and learn the necessary skills to be advocates for a just and peaceful world.

MAJOR (30 credits). The major in Peace and Justice Studies is offered in collaboration with the Department of Global Interdisciplinary Studies. To complete the major, students take five required courses and five elective courses in Peace and Justice, courses with a Peace and Justice attribute, or courses otherwise earning Peace and Justice credit.

Program Notes: Electives should be determined in consultation with the program director and tailored to the student’s field(s) of interest. Up to 3 credits in courses fewer than 3 credits with the PJ attribute can be bundled to count as one elective.

Required Courses:

Item #	Title	Credits
GIS 2000	Intro to Global Interd Studies	3

PJ 2800	Race, Class, & Gender	3
PJ 2993	Internship	3
GIS 6500	Capstone I: Research	3
GIS 6600	Capstone 2: Thesis	3
	PJ Elective	3
	PJ Elective	3
	PJ Elective	3
	PJ Elective	3
	PJ Elective	3

Russian Area Studies, B.A. (GIS)

Chairperson: Chiji Akoma, Ph.D.

Office Location: 36 Garey Hall

Telephone: 610-519- 6302

Website: <https://www1.villanova.edu/villanova/artsci/global.html>

About. The Department of Global Interdisciplinary Studies (GIS) provides students with a tripartite of skills, knowledge, and values that foster critical thinking, problem solving, and preparation for responsible global citizenship. Students gain an understanding of global studies, acquiring the know-how in global and digital literacy, cultural diversity and intercultural competences, interdisciplinary research, and a passion for social justice, nurtured in experiential learning.

MAJOR (31-34 credits)

Program Notes: Up to two courses taken as part of a study abroad program may be counted. For GIS 5011, Team-taught Topics Student takes two different topics, the first of which counts as the Junior Research Seminar for the Major (6 credits).

Required Courses:

Item #	Title	Credits
GIS 2000	Intro to Global Interd Studies	3
GIS 5011	GIS Select	3
GIS 5011	GIS Select	3
GIS 6500	Capstone I: Research	3
GIS 6600	Capstone 2: Thesis	3
GIS 5000	Special Topics	1
	Study Abroad	
	RAS Language Requirement	6
	RAS Electives	12

Russian Language & Cultural Studies Minor

Coordinator: Boris Briker, Ph.D.

Office Location: 36 Garey Hall

Telephone: 610-519-6302

Website: <https://www1.villanova.edu/villanova/artsci/global/criticallangs/russian.html>

About. The Russian Studies Program offers courses that cover from language study to all aspects of Russia — the history, literature, culture, folklore, music, film, news media, and women’s studies. This allows students to become familiar with Russian culture and society and the life experiences of Russians. Students also become familiar with Russia through courses on Russian history and politics offered by other departments on campus.

MINOR (24 credits). The Russian Language and Cultural Studies minor represents a cutting-edge intellectual experience that provides students with a real advantage in critiquing, understanding, and navigating the global landscape.

Program Notes: Other culture-based courses with RAS attribute found across disciplines also qualify.

Required Courses:

Item #	Title	Credits
RUS 1111	Introductory Russian I	6
RUS 1112	Introductory Russian II	6
RUS 1123	Intermediate Russian I	3

Required Courses:

Item #	Title	Credits
	RUS Elective	3
	RUS Elective	3

Sustainability Studies Minor

Chair: Joseph Lennon, Ph.D.

Program Director: Francis Calgano, Ph.D.

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/geography-environment.html>

MINOR (21 credits). The sustainability minor is open to all students and requires 6 courses and ~21 credits (dependent on lab course selections). It is designed for students who wish to deepen and broaden their knowledge of sustainability with a distinctive program of study encompassing the relationship between the environment and society. In addition to taking GEV 3001 (which will replace one course from either the Humanities or Policy Stem), students will select two courses from each of the three stems below: Humanities, Policy, and Science and Technology.

Program Notes: Students may count 1 course from their major or a relevant core

course (including relevant MSE courses) toward the minor).

Course list may be supplemented by the program director as new courses become available

- For PJ 3000, PJ 5000, ECO 4200, GEV 3000, GEV 4330, GEV 4340, GEV 4510, PSC 4275, CEE 4612, CHE 4831/32, MSE 20XX: Permission of
- program director required
- BIO 4451/52, CHE 4831/32, CHM 1311/01, GEV 1050, GEV 1051, GEV 432X, MSE 20XX: Associated Lab Required, see advisor

Required Courses:

<u>Item #</u>	<u>Title</u>	<u>Credits</u>
	Intro to Sustainability Study	
	Humanities Stem Courses	
	Policy Stem Courses	
	Science and Technology Stem Courses	

History – History B.A.

Chair: Marc Gallicchio, Ph.D.

Office Location: 403 Saint Augustine Center

Telephone: 610-519-4662

Website: <https://www1.villanova.edu/villanova/artsci/history.html>

About. The History Department at Villanova offers students a dynamic liberal arts education with courses that span from antiquity to the modern world and traverse every region of the globe. The undergraduate History program focuses on the attainment of deep historical knowledge and a critical understanding of the enduring influence of the past on contemporary societies. The Faculty members of the History Department work closely with our students and prioritize individual development. Our rigorous courses provide the essential transferable skills that make our students competitive on the job market after graduation, and stimulate the intellectual curiosity our students need to become engaged citizens of the world.

History seeks to understand and to explain the story of human experience, since the past provides the only laboratory of human experience actually lived. Historical study compliments and builds on the foundational courses in the core through its appreciation of the complexity of humankind, recognizing in the men and women who make history the intellectual, the material, social, and spiritual diversity of the human condition. History further advances the goals of the core curriculum through an interdisciplinary methodology that seeks to reconstruct our collective past. It is the story of individuals, and the story of the political, religious, economic, and social ideologies and institutions they create in their search for identity, purpose, and value. History recognizes both the commonality of the human experience and the reality of cultural, class, racial, and gender distinctions that enrich that experience.

MAJOR (33 credits)

Program Notes: The major is 33 credits and consists of 10 courses in history and one in art history. Majors must complete at least 18 credits/6 courses at Villanova. The Art History course required for the History major does not satisfy the Core Fine Arts requirement unless the History major is the student's secondary or tertiary major. Students for whom History is the primary major need to take an Art History course for the major and a different course with the Fine Arts attribute for the Core.

Required Courses:

<u>Item #</u>	<u>Title</u>	<u>Credits</u>
	Core History Course	3
	HIS 2000 or HIS 2001	3
	HIS 5501 or HIS 5515	3
HIS 5001	Junior Research Seminar	3
	History: Art History Elective	3
	HIS Elective	3
	HIS Elective	3
	HIS Elective	3
	HIS Elective	3
	HIS Elective	3
	HIS Elective	3

History Minor

Chair: Marc Gallicchio, Ph.D.

Office Location: 403 Saint Augustine Center

Telephone: 610-519-4662

Website: <https://www1.villanova.edu/villanova/artsci/history.html>

About. The History Department at Villanova offers students a dynamic liberal arts education with courses that span from antiquity to the modern world and traverse every region of the globe. The undergraduate History program focuses on the attainment of deep historical knowledge and a critical understanding of the enduring influence of the past on contemporary societies. The Faculty members of the History Department work closely with our students and prioritize individual development. Our rigorous courses provide the essential transferable skills that make our students competitive on the job market after graduation, and stimulate the intellectual curiosity our students need to become engaged citizens of the world.

MINOR (18 credits). A minor is open to all students and requires 6 history courses for 18 credits, these 18 credit hours must include one specially designated core course. History Courses (18 cr) – Select 6 Classes in AAH 1101, 1102, HIS 0000:9999, or any course with the HIS attribute. One of the following courses may also be taken for credit towards the History Minor.

Program Notes: History Minors must earn at least half (9 credits/3 courses) at Villanova. See History Department Undergraduate Programs website for details on AP Credit Policy as it related to Major/Minor.

One of the following courses may also be taken for credit towards the History Minor:

Required Courses:

Item #	Title	Credits
AAH 1101	His West Art: Ancient-Med	3
AAH 1102	His West Art: Renaiss – Cont	3

Honors

Director :Anna Bonta Moreland, Ph.D.

Office Location: 106 Garey Hall

Telephone: 610-519-4650

Website: <https://www1.villanova.edu/university/academic-enterprise/honors.html>

About. Admission to the University Honors Program is by invitation or by application to the Director. Members of the Program are expected to take Honors courses at least every third semester, and to maintain high academic standards (at least a 3.33 overall GPA). Individual Honors courses are open to all Villanova students who have at least a 3.0 overall GPA or will bring a special expertise to the course, contingent upon class size limitations.

DEGREE (30 credits). The Honors Degree, Thesis Track (10 Honors courses) Requirements: At least 3 upper level Honors courses, which will include a six-credit HON 6000 and HON 6002 senior thesis; minimum 3.33 GPA.

Required Courses:

Item #	Title	Credits
	Three Upper-Level Honors Courses	9
	Seven additional Honors Courses	21

The Honors Degree, Oral Examination Track (10 Honors courses) Requirements: An Oral Comprehensive Examination in the senior year integrates three upper-level Honors courses in a primary major or area of academic interest; minimum 3.33 GPA.

Required Courses:

Item #	Title	Credits
	Three Upper-Level Honors Courses	6
	Seven Honors Courses	21
HON 6003	Oral Exam Capstone	1

Honors Minor (5 Honors courses) Requirements: Five courses in Honors, at least two of which must be upper level; minimum 3.33 GPA. The Honors Program also offers upper-level seminars which fulfill degree requirements in specific academic disciplines. All courses are small seminars and have in common active class participation, and intensive writing requirements.

Required Courses:

<u>Item #</u>	<u>Title</u>	<u>Credits</u>
	Two Upper-Level Honors Courses	6
	Three Additional Honors Courses	9

Honors Minor in Politics, Philosophy and Economics (18 credits). An interdisciplinary minor offered through the Honors Program focusing on the intersection of the disciplines of politics, philosophy and economics. Students may only contract one non-Honors course to complete the minor requirements. Excluding the 3 Honors Cohort classes, which must be taken at Villanova, students may fulfill two of any other requirements by taking the equivalent course in an Honors-approved student abroad experience. Students pursuing a PPE minor in Honors may contract only 1 course in total to fulfill the requirements. Students only receive 1 Minor from Honors. If students are pursuing the Honors Degree, the PPE Minor would be considered a “track” within their Honors Degree.

Requirements: To achieve the Honors PPE minor, students must take 6 courses from among the following requirements (minimum 3.33 GPA and active status in Honors required).

Required Courses:

<u>Item #</u>	<u>Title</u>	<u>Credits</u>
	3 Honors Cohort Classes	9
	Honors Ethics Elective	3
	Honors Economics	3
	Honors Upper-Level Elective	3

Honors Minor in Medical Humanities (15 credits). An interdisciplinary minor offered through the University Honors Program focusing on the intersection of the humanities, medical care, medical ethics, and an holistic approach to medicine. Students pursuing this minor may contract only one course to fulfill the requirements. Students pursuing a Medical Humanities minor in Honors may contract only 1 course in total to fulfill the requirements. Students only receive 1 Minor from Honors. If students are pursuing the Honors Degree, the Medical Humanities Minor would be considered a “track” within their Honors Degree.

Requirements: To achieve the Honors Medical Humanities Minors students

must take 5 courses from among the following requirements (minimum 3.33 GPA and active status in Honors required).

Required Courses:

Item #	Title	Credits
	Honors Liberal Arts Elective	6
	Honors Ethics Elective	3
	PHI 2117 or SOC 3400	3
	Honors Senior Capstone	3

Humanities - Humanities, B.A.

Chair: Michael Tomko, Ph.D.

Office Location: 304 Saint Augustine Center

Telephone: 610-519-6165

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/humanities.html>

About. The Department of Humanities offers a coordinated series of seminars and courses designed to inquire into the human condition from an interdisciplinary perspective. Drawing on wisdom ancient and new, the curriculum encourages critical thinking about what is needed for human flourishing. Humanities faculty are specialists in complementary disciplines, including theology, philosophy, literature, political science, history, economics, and architectural history. Humanities courses fulfill certain requirements for the Core Curriculum of the College of Liberal Arts and Sciences.

MAJOR (30 credits). The Humanities major requires the completion of ten courses. All majors are required to take the four Gateway courses. In their final semester students also take the Senior Symposium. Students also take five free electives, three of which must be taken within the Department of Humanities.

Program Notes: Three of the five humanities electives must have the HUM subject code.

Required Courses:

Item #	Title	Credits
HUM 2001	THL: God	3
HUM 2002	Human Person	3
HUM 2003	PHI: World	3
HUM 2004	PSC: Society	3
HUM 6500	Senior Seminar	3
	Humanities Elective	3

Required Courses:

Item #	Title	Credits
	Humanities Elective	3
	Humanities Elective	3
	Humanities Elective	3

Humanities Minor

Chair: Michael Tomko, Ph.D.

Office Location: 304 Saint Augustine Center

Telephone: 610-519-6165

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/humanities.html>

About. The Department of Humanities offers a coordinated series of seminars and courses designed to inquire into the human condition from an interdisciplinary perspective. Drawing on wisdom ancient and new, the curriculum encourages critical thinking about what is needed for human flourishing. Humanities faculty are specialists in complementary disciplines, including theology, philosophy, literature, political science, history, economics, and architectural history. Humanities courses fulfill certain requirements for the Core Curriculum of the College of Liberal Arts and Sciences.

MINOR (15 credits). Students take two of the four Gateway courses, plus 3 electives, 2 of which must be taken in the Department of Humanities.

Program Notes: Three of the five humanities electives must have the HUM subject code.

Required Courses

Item #	Title	Credits
	HUM 2001, 2002, 2003 or 2004	6
	Humanities Elective	3
	Humanities Elective	3
	Humanities Elective	3

Italian, B.A.

Program Coordinator: Mary Migliozi, Ph.D.

Office Location: 339 Saint Augustine Center Telephone: 610-519-3763

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/romance-languages-literatures/italian-studies.html>

About. Knowledge of Italian provides access to a rich cultural background, and, at the same time, to a singular perspective on contemporary world. While exploring the master of Western thought (Dante, Petrarca, Boccaccio, Machiavelli, Michelangelo, Bernini, Galileo, and Vico to name a few), the encounter with Italian culture provides also, a singular reflection on current events, by embodying a unique business model (in fashion, design, and the culinary industry) and a peculiar political perspective on Europe and America.

MAJOR (31 credits). The Italian Studies Program, within the Department of Romance Languages and Literatures, is designed to make students fluent in

Italian, to expose them to Italian culture in all its aspects (literature, visual arts, design, history, cinema), to broaden their intellectual horizon, and to introduce them to the professional world. Italian offers a flexible major or minor, which can be easily combined with majors in psychology, communications, humanities, economics, business, nursing, law and politics.

Program Notes: Majors and minors can earn some of their credits by studying in Italy through the affiliated summer programs in Perugia, Rome, and Milan.

Required Courses:

Item #	Title	Credits
	ITA 1131 or 1132	3
	ITA 1138 or ITA 1140	3
	ITA 2220 or ITA 2221	3

Required Courses:

Item #	Title	Credits
	Italian Electives	18
	RLL 3413 or RLL 3412	3
ITA 3971	Directed Research in Italian	1

Italian Minor

Program Coordinator: Mary Migliozi, Ph.D.

Office Location: 339 Saint Augustine Center Telephone: 610-519-3763

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/romance-languages-literatures/italian-studies.html>

About. Knowledge of Italian provides access to a rich cultural background, and, at the same time, to a singular perspective on contemporary world. While exploring the master of Western thought (Dante, Petrarca, Boccaccio, Machiavelli, Michelangelo, Bernini, Galileo, and Vico to name a few), the encounter with Italian culture provides also, a singular reflection on current events, by embodying a unique business model (in fashion, design, and the culinary industry) and a peculiar political perspective on Europe and America.

MINOR (15 credits). A minor is open to all students and requires 5 Italian courses.

Program Notes: Once a sequence of courses has begun, a student may not revert to a lower- level course.

Required Courses:

Item #	Title	Credits
ITA 1131	Conversation & Composition I	3
RLL 3413	Topics on Italy and Beauty	3
	Upper-Level Italian Elective	3
	Upper-Level Italian Elective	3

Japanese Language - Japanese Language and Cultural Studies Minor

Acting Coordinator: Kayo Shintaku, Ph.D.

Office Location: Garey Hall 38C Telephone: 610-519-5076

kayo.shintaku@villanova.edu

About. The Japanese Language and Cultural Studies program offers a variety of courses, including language, traditional and popular culture, society, history, and literature. The program represents a cutting-edge intellectual experience that provides its minors with a real advantage in critiquing, understanding, and navigating the global landscape.

MINOR (28 credits). A minor is open to all students and requires six courses with a maximum of 28 credits.

Program Notes: GIS team-taught courses and contents courses from other departments with ASN attribute also qualify for JPN electives.

Courses taken as part of a study abroad will be counted.

Internship related to Japanese studies may be counted as an independent study.

Required Courses:

Item #	Title	Credits
	Japanese Language Requirement	16-22
	JPN Elective	3
	JPN Elective	3

Latin American Studies - Latin American Studies Minor

Program Director: Raúl Diego Rivera Hernández, Ph.D. Office

Location: 341 Saint Augustine Center, Telephone: (610) 519-3018

Website: <https://www1.villanova.edu/villanova/artsci/latinamerstudies.html>

About. The Villanova Latin American Studies Program, established in 1988, offers students in all of the university's four undergraduate colleges the opportunity to acquire a broad multi-disciplinary understanding and appreciation of Latin America. Students may pursue either a minor or the more comprehensive major (GLAS). Both are designed to complement a variety of majors; many concentration and minor courses can also be used to satisfy core curriculum requirements.

Since language is essential to understanding any culture, a degree of language proficiency is an integral part of both the major and the minor. And, since living in Latin America offers invaluable experience in language, culture, and contemporary life issues, students in the program are strongly encouraged to spend a summer or semester in the region.

MINOR (18 credits). A minor is open to all students and requires 6 courses for 18 credits.

Required Courses:

Item #	Title	Credits
	LAS Elective	3
	LAS Elective	3
	LAS Elective	3
	LAS Elective	3
	Spanish Elective	3
	Spanish Elective	3

Major (34 credits). The Department of Global Interdisciplinary Studies (GIS) offers a major with a specialization in Latin American Studies. Please see [that page](#) for detailed requirements of the major.

Liberal Arts - Liberal Arts Major

Chair: Susan Jacobs, M.A.

Office Location: 107 Saint Augustine Center Telephone: 610-519-3900

Website: <https://www1.villanova.edu/villanova/artsci/liberal.html>

MAJOR (30 credits). The Liberal Arts Major is a rigorous academic major, which requires students to complete an intensive course of study that includes 40 courses and at least 122 credits. The Liberal Arts Major requires a plan of study outlined with a faculty advisor as part of the application process and is granted by special permission from the Assistant Dean for Undergraduate Students. Please visit the office for more details.

Mathematics and Statistics

Mathematics, B.S.

Chair: Jesse Frey, Ph.D.

Office Location: 305 Saint Augustine Center

Telephone: 610-519-4850

Website: <https://www1.villanova.edu/villanova/artsci/mathematics.html>

About. The Department of Mathematics & Statistics offers a standard course of study for a mathematics major to provide the student with an introduction to the major branches of mathematics as an academic discipline within the context of a comprehensive education in the liberal arts and sciences. Students who complete the Mathematics program will be prepared for a broad range of opportunities in business, government, and service industries, as well as being prepared to undertake graduate study in mathematics and related disciplines.

MAJOR (59 credits). The program leading to the degree of Bachelor of Science in Mathematics is designed to introduce students to the major aspects of contemporary mathematics.

By selecting appropriate electives students may become well prepared either for positions in industry or for graduate study in mathematics and related disciplines. The mathematics major can prepare one for a career in actuarial science, operations research, computer science, statistics, biostatistics, mathematical physics, or any of many other areas which use mathematics.

Program Notes:

- A student pursuing a double major in mathematics and some other field may petition to have an approved upper-division course from their other major count as one of the four math electives. The course must have substantial mathematical content and may not significantly overlap with any of the other courses that the student is counting towards the major. A student pursuing a double major in mathematics and a closely related field such as computer science or engineering may petition to have two approved upper-division courses from their other major count as math electives.
- MAT majors may only count one course outside of the MAT and STAT subject code toward their elective credit within the major.

Required Courses:

Item #	Title	Credits
MAT 1000	Math and Stat Communities	1
MAT1500	Calculus I	4
MAT 1505	Calculus II	4
MAT 2500	Calculus III	4
MAT 2600	Foundation of Math I	3
MAT 2705	Diff Equation with Linear Alg	4

Required Courses:

Item #	Title	Credits
MAT 3300	Advanced Calculus	3
MAT 3400	Linear Algebra	3
MAT 3500	Modern Algebra I	3
MAT 5900	Seminar in Mathematics	3
	MAT Upper-Level Analysis	3
	Mathematics & Statistics Elective	12
	MAT Natural Science Elective	8

Statistics, B.S.

A major in Statistics provides students with the statistical expertise needed to secure employment in statistics and related fields, such as data science and biostatistics.

Major (55 credits). Students who are interested in the Major in Statistics should state this intention in their initial application to Villanova. Alternatively, after starting as a student at Villanova, students can switch to a Statistics Major or, if they are initially undeclared, declare a Statistics Major.

Required Courses:

Item #	Title	Credits
MAT 1000	Math and Stat Communities	1
MAT1500	Calculus I	4
MAT 1505	Calculus II	4
MAT 2500	Calculus III	4
	Linear Algebra Course	3
STAT 4310	Stat Methods	3
STAT 4315	Applied Statistical Models	3
STAT 4380	Data Science	3
STAT 5700	Math Statistics I	3
STAT 5705	Math Statistics II	3
CSC 1051	Algorithms & Data Struc I	4
	Statistics Major Electives	9
	Statistics Natural Science Elective	8
STAT 5905	Seminar in Statistics	3
MAT 2600	Foundation of Math I	3
MAT 2705	Diff Equation with Linear Alg	4
MAT3300	Advanced Calculus	3

Mathematics, Minor

Chair: Jesse Frey, Ph.D.

Office Location: 305 Saint Augustine Center

Telephone: 610-519-4850

Website: <https://www1.villanova.edu/villanova/artsci/mathematics.html>

About. Pursuing a minor in mathematics is a way for students who are not mathematics majors to demonstrate expertise in mathematics.

MINOR (27 credits). To receive a math minor certificate, the student must see Dr. Paul Pasles in person prior to the course registration for their final semester. Students may consult Dr. Pasles at any time for information and advice. If all requirements are satisfied, the certificate will be issued about two weeks after graduation and it will also appear on the student's transcript.

Program Notes: A student may petition to replace at most one of the five math minor electives with an upper division course from their own major. The proposed substitution must contain substantial mathematical content and not overlap with any other math minor elective courses. Examples of acceptable substitutions can be found at <https://www1.villanova.edu/villanova/artsci/mathematics/academic-programs/undergrad/minor.html>. Any course not listed there must be approved for substitution by the Department of Mathematics and Statistics.

Required Courses:

Item #	Title	Credits
MAT1500	Calculus I	4
MAT 1505	Calculus II	4

Required Courses:

Item #	Title	Credits
MAT 2500	Calculus III	4
	Mathematics & Statistic Electives for Minor	12
	Upper-Level MAT Elective	3

Statistics Minor

Chair: Jesse Frey, Ph.D.

Office Location: 305 Saint Augustine Center

Telephone: 610-519-4850

Website: <https://www1.villanova.edu/villanova/artsci/mathematics.html>

About. Pursuing a minor in statistics is a way for students who are not statistics majors to demonstrate expertise in statistics.

MINOR: STATISTICS (27 credits). To receive a statistics minor certificate, the student must see Dr. Yimin Zhang in person prior to course registration for their final semester. Students may consult Dr. Zhang at any time for information and advice. If all requirements for the minor are satisfied, then the certificate will be issued about two weeks after graduation. The minor will also appear on the student's transcript.

Program Notes: A student who is not a mathematics major may petition to have

an upper- division course from their major count as one of the two statistics electives. The course must have substantial statistical content and must not substantially overlap with any of the other courses that the student is counting towards the minor.

For mathematics majors, four courses may be counted towards both the mathematics major and the statistics minor: MAT1500, 1505, 2500 and either STAT 4310 or STAT 5700. No other courses count towards both. Thus, obtaining the statistics minor requires taking four additional courses beyond those required for the mathematics major.

Required Courses:

Item #	Title	Credits
MAT1500	Calculus I	4
MAT 1505	Calculus II	4
MAT 2500	Calculus III	4
STAT 4310	Stat Methods	3
STAT 4315	Applied Statistical Models	3
STAT 5700	Math Statistics I	3
	Statistics Elective Minor	3
	Statistics Elective Minor	3

Military Science (Army ROTC)

Director: Major Michael J. Repasky, U.S. Army
 Telephone: 610-519-5953

About. Villanova students are eligible to participate in the Army Reserve Officers Training Corps (ROTC) Program through a partnership agreement with the Widener University Department of Military Science. Army ROTC offers students the opportunity to graduate with a college degree and a commission in the United States Army, Army National Guard, or United States Army Reserve. All Army ROTC classes are conducted on the Villanova University campus.

Detailed information may be obtained from the Professor of Military Science, Widener University, Chester, PA 19013, (610) 499-4098. Go to www.armyrotc.villanova.edu for further details.

Required Courses:

Item #	Title	Credits
MS 101	Army Critical Thinking Introduction	
MS 102	Adaptive Leadership and Professional Competence	
MS 201	Foundations of Leadership	
MS 202	Foundations of Tactical Leadership	
MSL 301	Training Management and the Warfighting Functions	

MSL 302 Applied Leadership In Small Unit Operations
MS 401 Mission Command and the Army Profession
MS 402 Mission Command and the Company Grade Officer

Naval Science Program and Minor (Navy ROTC)

About. Villanova University, in a long-standing relationship with the United States Navy, maintains one of approximately 60 Naval Reserve Officers Training Corps units in the United States. The objective of the Unit is to educate prospective officers for the Navy and Marine Corps. Reserve commissions as Ensign or 2nd Lieutenant are awarded upon successful completion of prescribed naval science courses and graduation from the University. These commissioned officers will serve on active duty for a period of four to nine years, depending upon choice of warfare specialty.

All Scholarship and College Program students may select any major at the University. Midshipmen at Villanova study in a wide variety of majors in engineering, arts, sciences, business, and nursing. Detailed NROTC information may be obtained from the Naval Science Office, Room 103, John Barry Hall.

Peace and Justice Minor

Chair: Kathryn Getek Soltis, S.T.L., Ph.D.

Office Location: 106 Corr Hall, Telephone: 610-519-6849

Website: <https://www1.villanova.edu/vilanova/artsci/peaceandjustice.htm>

About. The interdisciplinary curriculum of the Center for Peace and Justice Education is rooted in Villanova's Augustinian tradition of education in the service of peace and social justice, with particular emphasis on the poor and marginalized in society. Students are prepared to understand the essential elements of a moral and just society, reflect on models for socially responsible resolution of injustice and conflict, and learn the necessary skills to be advocates for a just and peaceful world.

MINOR (18 credits)

To complete a minor in Peace and Justice, students must take six courses, including one of the foundational courses and five other courses in Peace and Justice, courses with a Peace and Justice attribute, or courses otherwise earning Peace and Justice credit.

Program Notes: PJ ePortfolio (three pieces of work and a short reflection). No more than three foundational courses may receive credit for the minor. Up to 3 credits in courses fewer than 3 credits with the PJ attribute can be bundled to count as one elective.

Required Courses:

Item #	Title	Credits
	PJ Foundation Course	3
	PJ Elective	3
	PJ Elective	3
	PJ Elective	3
	PJ Elective	3
	PJ Elective	3
	PJ Elective	3

Philosophy, B.A.

Chair: John Carvalho, Ph.D.

Office Location: 108 Saint Augustine Center Telephone: 610-519-4690

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/philosophy.html>

About. The Philosophy department offers interesting courses that help students better understand the world and their place in it. Philosophy courses teach students to analyze difficult texts, to write clearly and precisely, to defend their views with cogent arguments and to take pleasure in the struggle with complex ideas and questions.

MAJOR (10 courses, 30 credits). The philosophy major consists of 10 courses and 30 credits.

Double Majors. Because of the interdisciplinary nature of philosophy, the department welcomes and encourages double majors. With the permission of the chair, philosophy majors may count up to two related courses from the second major toward fulfillment of the philosophy major requirements.

Required Courses:

Item #	Title	Credits
PHI 1000	Knowledge, Reality, Self	3
	Ancient Philosophy Elective	3
	Medieval Philosophy Elective	3
	Modern Philosophy Elective	3
	PHI Research Requirement	3
	Advanced Seminar for Philosophy Majors (Capstone)	3
	PHI Elective	3
	PHI Elective	3
	PHI Elective	3
	PHI Elective	3

Philosophy Minor

Chair: John Carvalho, Ph.D.

Office Location: 108 Saint Augustine Center Telephone: 610-519-4690

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/philosophy.html>

About. The Philosophy department offers interesting courses that help students better understand the world and their place in it. Philosophy courses teach students to analyze difficult texts, to write clearly and precisely, to defend their views with cogent arguments and to take pleasure in the struggle with complex ideas and questions.

MINOR (5 courses). Choose 5 Philosophy courses worth 3 credits each from PHI 1000:9999 for a total 15 credits.

Required Courses:

<u>Item #</u>	<u>Title</u>	<u>Credits</u>
	PHI Elective	3
	PHI Elective	3
	PHI Elective	3
	PHI Elective	3
	PHI Elective	3

Physics, B.A.

Chair: Michael Hones, Ph.D.

Office Location: 347 Mendel Science Center Telephone: 610-519-4885

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/physics.html>

About. Physics is an experimental science in which its practitioners investigate nature at the most fundamental level on scales ranging from subatomic distances to the size of the universe. It is a quest to understand the origin and behavior of all forces: forces that account for the observed stability and in some cases instability of the atomic nucleus; forces that account for the stability of the atom; and forces that account for the stability of matter and the large-scale structures of the universe.

In this sense, it is the most fundamental of all physical sciences, and the successful physics student will be adept at solving problems using techniques that probe the fundamental building blocks of nature. Being trained to analyze phenomena at the most fundamental level makes the physics major versatile. Therefore, the student who successfully completes the degree in physics will not only be well prepared for graduate studies in physics, but also for employment in research-oriented industries or study in professional fields.

MAJOR (B.A.) (67 credits). The BA in Physics is for the student who wants to minor in another science or in engineering or who is planning employment in

graduate studies outside of the sciences in fields such as medicine, law, business, journalism, secondary school teaching, or other fields. Instead of the normal advanced courses in physics, the candidate uses these slots for a minor in another area. There is a senior research option.

Program Notes: 3-credit PHY elective OR technical elective. Approval of the Physics chairperson required.

Required Courses:

Item #	Title	Credits
PHY 2410	University Phy: Mechanics	3
PHY 2411	Lab: Mechanics	1
PHY 2412	Univ Physics: Elec & Mag	3
PHY 2413	Lab: Elec & Magnetism	1
PHY 2601	Computational Phy Lab I	1
PHY 2603	Computational Phy Lab II	1
MAT 1500	Calculus I	4
MAT 1505	Calculus II	4
PHY 2414	Univ Physics: Thermo	3
PHY 2415	Lab: Thermodynamics	1
PHY 2416	Modern Physics	3
PHY 2417	Lab: Modern Physics	1
PHY 3310	Electronics	3
PHY 3311	Electronics Lab	1
PHY 4200	Mathematical Physics I	3
MAT 2500	Calculus III	4
MAT 2705	Diff Equation with Linear Alg	4
CHM 1103	General Chemistry Lab I	1
CHM 1151	General Chemistry I	4
CHM 1152	General Chemistry II	4
PHY 4100	Mechanics I	3
PHY 4301	Experimental Methods I	2
PHY 4303	Experimental Methods II	2
PHY 4000	Elec & Magnetism I	3
PHY 4001	Elec & Magnetism I Lab	1
PHY 5100	Quantum Mechanics	3
	PHY Elective	3

Physics, B.S.

Chair: Michael Hones, Ph.D.

Office Location: 347 Mendel Science Center, Telephone: 610-519-4885

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/physics.html>

About. Physics is an experimental science in which its practitioners investigate nature at the most fundamental level on scales ranging from subatomic distances to the size of the universe. It is a quest to understand the

origin and behavior of all forces: forces that account for the observed stability and in some cases instability of the atomic nucleus; forces that account for the stability of the atom; and forces that account for the stability of matter and the large-scale structures of the universe.

In this sense, it is the most fundamental of all physical sciences, and the successful physics student will be adept at solving problems using techniques that probe the fundamental building blocks of nature. Being trained to analyze phenomena at the most fundamental level makes the physics major versatile. Therefore, the student who successfully completes the degree in physics will not only be well prepared for graduate studies in physics, but also for employment in research-oriented industries or study in professional fields.

MAJOR (B.S.) (88 credits). The BS in Physics is for the student who wants to be a professional physicist or go on to graduate school in physics.

Required Courses:

Item #	Title	Credits
PHY 2410	University Phy: Mechanics	3
PHY 2411	Lab: Mechanics	1
PHY 2412	Univ Physics: Elec & Mag	3
PHY 2413	Lab: Elec & Magnetism	1
PHY 2601	Computational Phy Lab I	1
PHY 2603	Computational Phy Lab II	1
MAT 1500	Calculus I	4
MAT 1505	Calculus II	4
PHY 2414	Univ Physics: Thermo	3
PHY 2415	Lab: Thermodynamics	1
PHY 2416	Modern Physics	3
PHY 2417	Lab: Modern Physics	1
PHY 3310	Electronics	3
PHY 3311	Electronics Lab	1
PHY 4200	Mathematical Physics I	3
MAT 2500	Calculus III	4
MAT 2705	Diff Equation with Linear Alg	4
CHM 1103	General Chemistry Lab I	1
CHM 1151	General Chemistry I	4
CHM 1152	General Chemistry II	4
PHY 4100	Mechanics I	3
PHY 4102	Mechanics II	3
PHY 4301	Experimental Methods I	2
PHY 4000	Elec & Magnetism I	3
PHY 4001	Elec & Magnetism I Lab	1
PHY 4002	Elec & Magnetism II	3
PHY 4003	Elec & Magnetism II Lab	1
PHY 4202	Mathematical Physics II	3

PHY 5100	Quantum Mechanics	3
PHY 5200	Thermo/Statistical Mech	3
PHY 5300	Subatomic Physics	3

Required Courses:

<u>Item #</u>	<u>Title</u>	<u>Credits</u>
	PHY Elective	3
	Science Elective	3-4

Physics Minor

Chair: Michael Hones, Ph.D.

Office Location: 347 Mendel Science Center, Telephone: 610-519-4885

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/physics.html>

About. Physics is an experimental science in which its practitioners investigate nature at the most fundamental level on scales ranging from subatomic distances to the size of the universe. It is a quest to understand the origin and behavior of all forces: forces that account for the observed stability and in some cases instability of the atomic nucleus; forces that account for the stability of the atom; and forces that account for the stability of matter and the large-scale structures of the universe.

In this sense, it is the most fundamental of all physical sciences, and the successful physics student will be adept at solving problems using techniques that probe the fundamental building blocks of nature. Being trained to analyze phenomena at the most fundamental level makes the physics major versatile. Therefore, the student who successfully completes the degree in physics will not only be well prepared for graduate studies in physics, but also for employment in research-oriented industries or study in professional fields.

MINOR (31 credits). The Physics Department offers a minor in physics to qualified students whose major area of study lies outside of physics. In general, a student in any area of study, other than physics, may obtain a minor in physics.

Program Notes: The Minor in Applied Physics for Math Majors requires all of the Math courses required for the Math degree, plus MAT 4310, PHY 2410/2411, through PHY 2416/2417, PHY 3310/3311, and PHY 4301/4303

Required Courses:

<u>Item #</u>	<u>Title</u>	<u>Credits</u>
PHY 2410	University Phy: Mechanics	3
PHY 2411	Lab: Mechanics	1
PHY 2412	Univ Physics: Elec & Mag	3
PHY 2413	Lab: Elec & Magnetism	1

PHY 2414 Univ Physics: Thermo 3

Required Courses:

Item #	Title	Credits
PHY 2415	Lab: Thermodynamics	1
PHY 2416	Modern Physics	3
PHY 2417	Lab: Modern Physics	1
	Upper-Level Physics Elective	3
	Upper-Level Physics Elective	3
	Upper-Level Physics Elective	3
	Upper-Level Physics Elective	3
	Upper-Level Physics Elective	3

Political Science, B.A.

Chair: Markus Kreuzer, Ph.D.

Office Location: 202 Saint Augustine Center Telephone: 610-519-4710

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/political-science.html>

About. Today, no less than in the past, it is essential for citizens in a democracy to be educated about the political system in which they live and to know how that system relates to other governments and international issues. The study of political science will educate you about timely and important political issues on a national and global scale while helping you develop a set of analytical, reasoning and research skills to last a lifetime. As a political science major, you will learn about American politics, comparative politics, international relations and political theory; become familiar with the methodology of social science inquiry and learn how to conduct research; build competence in oral and written expression; develop reasoning and analytical skills; become a politically engaged citizen-leader; prepare for any number of politically-oriented careers or for [graduate or professional training](#). As a political science major, you will learn how political leaders operate; governments make decisions; politics shapes public policy; governments respond to internal and international conflicts; people develop political attitudes and preferences; groups attempt to influence government; and governments can best serve their people.

MAJOR (33 credits). In the context of the liberal arts tradition, the Department of Political Science seeks to encourage in its students a commitment to intellectual curiosity, academic excellence, and responsible civic engagement. The Department is committed to helping students improve their skills of observation, critical reading, rigorous thought, careful evidence-based argumentation, and effective communication, and to develop values of good citizenship.

Program Notes: Foundational courses should be taken immediately upon declaring the major. They serve as prerequisites for many of the upper

division courses and the senior seminar. With the exception of internships (up to 3 credits), courses taken on a satisfactory/unsatisfactory basis cannot be used to satisfy requirements for the major. Any senior with a GPA of 3.0 or above may request to take a graduate PSC course.

Required Courses:

Item #	Title	Credits
PSC 1100	American Government	3
PSC 1200	International Relations	3
PSC 1300	Comparative Politics	3
PSC 1400	Political Theory	3
PSC 1900	Research Seminar	3
PSC 6900	Political Sci Seminar	3
	PSC Electives	3
	PSC Electives	3
	PSC Electives	3

Required Courses:

Item #	Title	Credits
	PSC Electives	3
	PSC Electives	3

Political Science Minor

Chair: Markus Kreuzer, Ph.D.

Office Location: 202 Saint Augustine Center, Telephone: 610-519-4710

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/political-science.html>

About. Today, no less than in the past, it is essential for citizens in a democracy to be educated about the political system in which they live and to know how that system relates to other governments and international issues. The study of political science will educate you about timely and important political issues on a national and global scale while helping you develop a set of analytical, reasoning and research skills to last a lifetime. As a political science major, you will learn about American politics, comparative politics, international relations and political theory; become familiar with the methodology of social science inquiry and learn how to conduct research; build competence in oral and written expression; develop reasoning and analytical skills; become a politically engaged citizen-leader; prepare for any number of politically-oriented careers or for [graduate or professional training](#). As a political science major, you will learn how political leaders operate; governments make decisions; politics shapes public policy; governments respond to internal and international conflicts; people develop political attitudes and preferences; groups attempt to influence government; and governments can best serve their people.

MINOR (18 credits). A minor is open to all students and requires 6 courses

and 18 credits.

Program Notes: Students completing the minor are encouraged to focus on one or two subfields, although they are not required to do so. • Internship credit will not be applied to the Political Science minor.

Required Courses:

Item #	Title	Credits
	PSC Foundational Elective	6
	PSC Elective	3
	PSC Electives	3
	PSC Electives	3
	PSC Electives	3

Psychology and Brain Sciences

Psychology, B.A.

Chair: Michael Brown, Ph.D.

Office Location: 334 Tolentine Hall Telephone: 610-519-4722

Website: <https://www1.villanova.edu/villanova/artsci/psychology.html>

About. Psychology is the basic and applied science of mind and behavior. Psychologists use the methods of both natural and social science to advance our knowledge and understanding of thought, emotion, and behavior in humans and other organisms. Psychologists also apply this knowledge to improve the conditions of individuals and society. The Department of Psychological and Brain Sciences offers two majors in psychology, a Bachelor of Science (B.S.) and a Bachelor of Arts (B.A.). To declare either major students must have completed PSY 1000 or PSY 1001, or have AP credit for PSY 1000. In addition, they must have a C+ or higher in PSY 1000 or PSY 1001, or have an overall minimum GPA of 3.00.

MAJOR (B.A.) (31 credits)

Program Notes: Courses taken on a satisfactory/unsatisfactory basis cannot be used to satisfy requirements for the major, except for PSY 2100: Seminar in Professional Development.

Required Courses:

Item #	Title	Credits
	PSY 1000 or PSY 1001	3
PSY 2000	Intro Statistics	3
PSY 2050	Research Methods in Psy	3
PSY 2100	Sem Professional Development	1
	PSY 3000-Level Elective	3
	PSY 3000-Level Elective	3
	PSY 3000-Level Elective	3

PSY 4200 or PSY 4500	3
PSY Elective	3
PSY Elective	3
PSY 5150 or PSY 5250	3

Cognitive and Behavioral Neuroscience, B.S.

About. The major in Cognitive and Behavioral Neuroscience (CBN) provides an intensive course of study focused on brain-behavior relationships, ranging from genetic to whole brain contributions to behavior and mental processes. The program is excellent preparation for a variety of careers focusing on research and/or practice in neuroscience, medicine, allied health fields, and psychology, as well as for more general careers in areas such as public policy and education.

Students are accepted into Villanova University as declared CBN majors. Therefore, prospective students who are interested in the major should select the CBN program when applying to the University. Students who have already entered Villanova may appeal directly to the Department of Psychological and Brain Sciences for special permission into the major.

MAJOR (65-70 credits)

Program Notes: PSY 2900 is a topics course and the topic must be approved for it to count as a CBN elective. The following topics have been approved: “Drugs & Behavior”, “Emotion”, “Neuroethics”. Other topics do not count without approval. BIO 4950 is a topics course and the topic must be approved for it to count as a CBN elective. The following topic has been approved: “Sex, Brains & Behavior. Other topics do not count without approval. PSY 5900 is an independent research course and can count as a CBN elective only with pre-approval

Required Courses:

Item #	Title	Credits
CHM 1151	General Chemistry I	4
CHM 1103	General Chemistry Lab I	1
CHM 1152	General Chemistry II	4
CHM 1104	General Chemistry Lab II	1
BIO 2105	General Biology I	4
BIO 2106	General Biology II	4
BIO 3351	Genetics	4
	MAT 112 or MAT 1500	4
	MAT 1314 or MAT 1505	3-4
	PSY 1000 or PSY 1001	3
PSY 2000	Intro Statistics	3

PSY 2050	Research Methods in PSY	3
PSY 4200	Biopsychology	3
PSY 4500	Cognitive Psychology	3
CBN 4000	Cell & Behavioral Neuroscience	3
CBN 4100	Cognitive Neuroscience	3
	CBN 5000 or CBN 6002	3
	CBN Approved Elective	3
	CBN Approved Elective	3
	CBN Approved Elective	3
	CBN Approved Elective	3

Psychology, B.S.

Chair: Michael Brown, Ph.D.

Office Location: 334 Tolentine Hall Telephone: 610-519-4722

Website: <https://www1.villanova.edu/villanova/artsci/psychology.html>

About. Psychology is the basic and applied science of mind and behavior. Psychologists use the methods of both natural and social science to advance our knowledge and understanding of thought, emotion, and behavior in humans and other organisms. Psychologists also apply this knowledge to improve the conditions of individuals and society. The Department of Psychological and Brain Sciences offers two majors in psychology, a Bachelor of Science (B.S.) and a Bachelor of Arts (B.A.). To declare either major students must have completed PSY 1000 or PSY 1001, or have AP credit for PSY 1000. In addition, they must have a C+ or higher in PSY 1000 or PSY 1001, or have an overall minimum GPA of 3.00.

MAJOR (B.S.) (53 credits)

Program Notes: Courses taken on a satisfactory/unsatisfactory basis cannot be used to satisfy requirements for the major, except for PSY 2100: Seminar in Professional Development.

Required Courses:

Item #	Title	Credits
	PSY 1000 or PSY 1001	3
PSY 2000	Intro Statistics	3
PSY 2050	Research Methods in Psy	3
PSY 2100	Sem Profession Development	1
PSY 4200	Biopsychology	3
PSY 4500	Cognitive Psychology	3
	PSY 3000-level Elective	3
	PSY 3000-level Elective	3
	PSY 3000-level Elective	3
	PSY Elective	3
	PSY Elective	3

BIO 2105	General Biology I	4
BIO 2106	General Biology II	4
CSC 1051	Algorithms & Data Struc I	4
	Mathematics for Psychology Electives	7-8
	PSY 5150 or PSY 5250	3

Psychology Minor

Chair: Michael Brown, Ph.D.

Office Location: 334 Tolentine Hall Telephone: 610-519-4722

Website: <https://www1.villanova.edu/villanova/arts/psychology.html>

About. Psychology is the basic and applied science of mind and behavior. Psychologists use the methods of both natural and social science to advance our knowledge and understanding of thought, emotion, and behavior in humans and other organisms. Psychologists also apply this knowledge to improve the conditions of individuals and society. The Department of Psychological and Brain Sciences offer two majors in psychology, a Bachelor of Science (B.S.) and a Bachelor of Arts (B.A.).

MINOR (15 credits). A minor is open to all students and requires 5 courses and 15 credits.

Program Notes: Courses taken on a satisfactory/unsatisfactory basis cannot be used to satisfy requirements for the minor. No more than two prior approved psychology courses may be taken at another institution (AP courses, transfer courses, courses taken abroad, etc.) and be counted toward the minor. Before declaring the psychology minor, students must have completed PSY 1000 or 1001 or have AP credit for PSY 1000.

Required Courses:

<u>Item #</u>	<u>Title</u>	<u>Credits</u>
PSY 1000	General Psychology	3
	PSY Elective	3
	PSY Elective	3
	PSY Elective	3
	PSY Elective	3

Public Administration Minor

Chair: Catherine E. Wilson, Ph.D.

Office Location: 205 Saint Augustine Center Telephone: 610-519-3934

Website: <https://www1.villanova.edu/villanova/arts/publicadmin.html>

About. The Department of Public Administration offers a Minor in Public Service and Administration for undergraduate students. The minor is an interdisciplinary course of study, open to students from all Colleges, that

prepares students to be responsibly engaged citizens, government managers, and community leaders working in the “new public sector.” The “new public sector” refers to the complex relationships that exist between government at all levels, nonprofit organizations, higher education, and the private sector. Now more than ever before, these groups have been called upon to cooperate in order to address society’s most pressing and challenging problems.

MINOR (18 credits). In the Public Service and Administration Minor, you will be introduced to ethical, philosophical, theological, historical, social, and political perspectives that influence the leadership and management of government and nonprofit organizations. The specific goals of this minor are to help prepare you to understand and pursue the common good; assist in the creation, implementation, and analysis of public programs; strengthen communities through innovative leadership and engaged citizenship; reflect on how the citizen as public servant discovers meaning and purpose in one’s life by forging and developing the bonds of community.

Program Notes: At least four of the courses (12 credits) must be within the Department of Public Administration and up to two pre-approved elective courses (6 credits) may be taken outside of the Department’s course offerings. Additional approved electives outside the Department of Public Administration may be found on the Public Administration website. All service learning courses can be approved as electives towards the Minor.

Required Courses:

Item #	Title	Credits
PA 1050	Public Administration	3
	PA 2000 or PA 6000	3
	PA Electives	6
	Additional PA Electives	6

Russian Studies

Russian Area Studies Concentration (RASCON)

Chair: Joseph Loya, O.S.A.

Office Location: 233 Saint Augustine Center Telephone: 610-519-7243

Website: <https://www1.villanova.edu/villanova/artsci/russianarea.html>

About. The Concentration in Russian Area Studies promotes the study of the Russian language, culture and society. With a rigorous and intellectually challenging program, students in the Russian Area Studies Concentration will become proficient in the language by taking at least two semesters of Russian language at the intermediate level and will gain well- rounded knowledge of the culture by taking four electives chosen from designated courses in History, Literature, Political Science, Economics, Theology and Religious Studies, and Art and Art History.

CONCENTRATION (18 credits). The Russian Area Studies Concentration is open to all students enrolled in the University. The purpose of the concentration is to provide students with a multi-disciplinary comprehension of Russia through the study of this complex country's language, culture, literature, history, politics, religions and art.

Program Notes: Other appropriate special topics courses in Economics and History may count towards electives as approved by the director.

Required Courses:

Item #	Title	Credits
RUS 1123	Intermediate Russian I	3
RUS 1124	Intermediate Russian II	3
	Russian Studies Electives	12

Sociology, B.A.

Chair: Tom Arvanites, Ph.D.

Office Location: 204 Saint Augustine Center Telephone: 610-519-4742

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/sociology-criminology.html>

About. Sociology is the systematic study of social life. Sociologists believe that people's actions are strongly influenced by the conditions and situations in which they live, work, and play. Everybody makes decisions, but we recognize and study how social structures and institutions affect and constrain those decisions. Our goal as researchers is to expose and analyze the impacts of those circumstances on human decisions, societies, and opportunities. Methodologically, we incorporate multiple perspectives and analytical approaches to help create a more holistic understanding of our society. Our mission as teachers is to empower students to think critically and rigorously about individuals and societies.

Through our diverse offerings on local, regional, national and global social processes, we strive to create more complete human beings with a keen sense of humanity, social justice, and appropriate social policy.

MAJOR (33 credits). The Major consists of 33 credits. A student must allow three full semesters after the declaration of the Major to complete all requirements. One of the Sociology electives for the Major can be satisfied by an internship for credit with approval from the department Chair, provided that the student has at least 15 credits toward the Major.

Program Notes: A student taking an internship in a field setting in the second semester of their junior year or during their senior year should consult with the department Chair. Students must have at least three full semesters

remaining at Villanova University to declare a Sociology major.

Required Courses:

Item #	Title	Credits
SOC 1000	Intro to Sociology	3
SOC 5300	Data Analysis – Social Scientist	3
SOC 5400	Applied Research in Soc	3
SOC 6500	Seminar	3
	SOC Theory Elective	3
	SOC Elective	3
	SOC Elective	3
	SOC Elective	3
	SOC Elective	3

Required Courses:

Item #	Title	Credits
	SOC Elective	3
	CRM Elective	3

Sociology Minor

Chair: Tom Arvanites, Ph.D.

Office Location: 204 Saint Augustine Center Telephone: 610-519-4742

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/sociology-criminology.html>

About. Sociology is the systematic study of social life. Sociologists believe that people’s actions are strongly influenced by the conditions and situations in which they live, work, and play. Everybody makes decisions, but we recognize and study how social structures and institutions affect and constrain those decisions. Our goal as researchers is to expose and analyze the impacts of those circumstances on human decisions, societies, and opportunities. Methodologically, we incorporate multiple perspectives and analytical approaches to help create a more holistic understanding of our society. Our mission as teachers is to empower students to think critically and rigorously about individuals and societies.

Through our diverse offerings on local, regional, national and global social processes, we strive to create more complete human beings with a keen sense of humanity, social justice, and appropriate social policy.

MINOR (15 credits). A Minor is open to all students and requires 5 courses and 15 credits. Courses taken on a satisfactory/ unsatisfactory basis cannot be used to satisfy requirements for the Minor. Minors cannot receive Sociology credit for an internship.

Program Notes: Only one course may be transferred from another

university. No course for the minor may be taken S/U, and no more than one course transferred from another university will be accepted. Minors cannot receive Sociology credit for an internship.

Required Courses:

Item #	Title	Credits
SOC 1000	Intro to Sociology	3
	SOC Minor Elective	
	SOC Minor Elective	
	SOC Minor Elective	
	SOC Minor Elective	

Spanish Studies, B.A.

Chairperson: Mercedes Juliá, Ph.D.

Office Location: 303 Saint Augustine Center Telephone: (610) 519-7794

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/romance-languages-literatures/spanish-studies.html>

About. Spanish is the language that the majority of students in the United States (and in Villanova) chooses to study at the present time for very good reasons: It is the second major language spoken in the world (after Mandarin) and it is the second language spoken in the United States. Therefore it will be very useful and advantageous to know Spanish in any career path that students may choose. Approximately 800 students take Spanish undergraduate courses every semester at Villanova. Students are encouraged to spend summers and semesters abroad in Spain and Central and South America, to obtain a greater proficiency in the language.

MAJOR (30 credits). The influence of Spanish crosses centuries as well as geographic boundaries. It is a dynamic and exciting language used in diverse parts of the world, such as: Central, South, North America, the Caribbean and Spain. Spanish and its different cultures are taught at Villanova in interdisciplinary courses, in the Liberal Arts Program, Cultural Studies program, and in courses that were designed in response to these developments. The classes provide students with a thorough grounding in the history, politics, cultural production (literatures, film, theater), linguistics, post-colonial experiences, and development of the Hispanic world.

Program Notes: One RLL course taught in English with SPA attribute may be accepted for the major. Students may obtain up to 6 credits through the Villanova summer program in Cádiz (Spain) or Valparaiso (Chile), and up to 9 credits through an authorized semester program. Contact the ISO for details.

Required Courses:

Item #	Title	Credits
SPA 1131	Conversation & Composition I	3

SPA 1132	Conversation & Composition II	3
	SPA 1138 or SPA 1140	3
	SPA 2220 or SPA 2221	3
SPA 3970	Research Seminar	3
	Intermediate Spanish Elective	3
	Intermediate Spanish Elective	3
	Intermediate Spanish Elective	3
	Intermediate Spanish Elective	3
	Intermediate Spanish Elective	3

Spanish Studies Minor

Chairperson: Mercedes Juliá, Ph.D.

Office Location: 303 Saint Augustine Center

Telephone: (610) 519-7794

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/romance-languages-literatures/spanish-studies.html>

About. Spanish is the language that the majority of students in the United States (and in Villanova) chooses to study at the present time for very good reasons: It is the second major language spoken in the world (after Mandarin) and it is the second language spoken in the United States. Therefore it will be very useful and advantageous to know Spanish in any career path that students may choose. Approximately 800 students take Spanish undergraduate courses every semester at Villanova. Students are encouraged to spend summers and semesters abroad in Spain and Central and South America, to obtain a greater proficiency in the language.

MINOR (12 credits). The department encourages students to obtain a minor in Spanish if their schedule does not permit them to complete a major. In order to do so, students may come to the Department main office, located in SAC 303 and fill out a form. At the time of graduation and upon completion of the minor requirements, students will be issued a Minor certificate and the minor will appear on their transcript.

Program Notes: Of the four required courses, one must be at the 3000 level and taken at Villanova, or at a Villanova study abroad program (Cádiz or Valparaiso). Courses in English do not count for the minor.

Required Courses:

<u>Item #</u>	<u>Title</u>	<u>Credits</u>
SPA 1131	Conversation & Composition I	3
SPA 1132	Conversation & Composition II	3
	Upper-Level Spanish	3
	Elective for Minor	3

Theatre

Chairperson: Valerie M. Joyce, Ph.D.

Office Location: 205 Saint Augustine Center Telephone: 610-519-4760

<https://www1.villanova.edu/villanova/artsci/theatre/AcademicPrograms.html>.

Music Minor. Villanova has a vibrant musical culture, and students interested in Music can declare a minor in Music or take courses in Music taught by faculty from across the University. Develop your skills and learn how to get the most out of your experience as a performer and listener with a broad range of courses as a Music Minor.

Minor (16 credits). Music Minors must complete five Music courses.

Required Courses:

Item #	Title	Credits
SAR 2100	Music Theory I	4
	SAR 2110 or SAR 2111	3
	Music Minor Elective	3
	Music Minor Elective	3
	Music Minor Elective	3

Studio Art Minor. Students interested in Art can declare a minor in Studio Art, or take courses taught by our inspiring faculty to develop a deeper appreciation and build skills in the arts.

Required Courses:

Item #	Title	Credits
	Studio Art Core	12
	Studio Art Elective	3

Theatre Minor

Chairperson: Valerie M. Joyce, Ph.D.

Office Location: 205 Saint Augustine Center Telephone: 610-519-4760

<https://www1.villanova.edu/villanova/artsci/theatre/AcademicPrograms.html>.

About. The Villanova University Theatre Department aims to inform and inspire theatre artists, administrators, and scholars who will impact the future of this dynamic art form. Our culture of creativity engages in rigorous study and the practical application of theatrical theories and techniques. We believe art has the power to transform hearts and minds by challenging both individuals and communities.

MINOR (15 credits and practicum). Undergraduate students may fulfill a Theatre minor by completing five theatre courses (two required/ three elective) and a theatre practicum.

Program Notes: To fulfill the theatre practicum, contact program coordinator [Kevin Esmond](#).

Required Courses:

Item #	Title	Credits
THE 2029	Fund Princ of Acting	3
THE 2040	Theatre Practicum	0
THE 3030	Spec Topics in Theatre	3
	THE Elective	3
	THE Elective	3
	THE Elective	3

Theology and Religious Studies, B.A.

Chairperson: Peter Spitaler, Ph.D. Program Director: Mark Graham, Ph.D.

Office Location: 203 Saint Augustine Center Telephone: 610-519-4730

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/theology/faculty.html>

About. Theological and religious studies as conceived, studied, and advanced at Villanova are interdisciplinary and integrative. Students pursue their objectives from diverse theological and religious perspectives, places them in dialogue with each other, and integrate religious and theological knowledge with experience and other forms of knowing.

Our programs explore the intersections of Catholic theology, religion, and cultures(s) and prepare students for graduate studies and for careers in humanitarian, philanthropic or other non-profit, charitable organizations; and in religious organizations as campus, youth or parish minister, educator, catechist, retreat worker, administrator, counselor, spiritual director or in one of the many other positions such organizations offer.

PRIMARY MAJOR (30 credits). The primary major emphasizes a broad understanding of Christian and non-Christian theological and religious traditions. It is a stand-alone program, and students may take it in conjunction with another major (i.e., the traditional “double” major).

Program Notes: Total number of elective courses from outside the TRS Department (including courses taken overseas) must not exceed nine credit hours. Theology majors are required to select a concentration that will give shape and focus to the major. Students must also take 1 Portfolio Course: THL 6600 (0 cr).

Primary Major Required Courses:

Item #	Title	Credits
THL 1000	Faith, Reason, and Culture	3
THL 6300	Research Seminar	3
THL 6500	Advanced Seminar	3
	THL 5001 & THL 5002	6
	Theology Tracks for Primary Major	12
	THL Elective	3

SECONDARY MAJOR (24 credits). The secondary major highlights the interdisciplinary and multidisciplinary nature of theological inquiry and of the study of religion. It must be taken in conjunction with another major and completed concurrently with it.

Program Notes: Students must also take 1 Portfolio Course: THL 6600 (0 cr). Total number of elective courses from outside the TRS Department (including courses taken overseas) must not exceed six credit hours. Theology majors are required to select a concentration that will give shape and focus to the major.

Secondary Major Required Courses:

Item #	Title	Credits
THL 1000	Faith, Reason, and Culture	3
THL 6300	Research Seminar	3
THL 6500	Advanced Seminar	3
THL 5001	Theology Major Seminar	3
	Theology Tracks for Secondary Major	3
	THL Elective	3

Theology and Religious Studies Minor

Chairperson: Peter Spitaler, Ph.D. Program Director: Mark Graham, Ph.D.

Office Location: 203 Saint Augustine Center Telephone: 610-519-4730

Website: <https://www1.villanova.edu/university/liberal-arts-sciences/programs/theology/faculty.html>

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one of the many other positions such organizations offer.

MINOR (15 credits). The minor is open to all students. Students can take the minor in conjunction with any other program in any Villanova College. Once the required coursework is completed, Villanova recognizes the minor at the time of graduation on the official transcript. For the THL Elective: 3 credits may be taken from among the approved extra- departmental courses listed below the Required Minor Courses list. The TRS Director of Undergraduate Programs may approve additional courses (for example, a course taken overseas or particular themes or topic courses not listed explicitly in the University Catalog). Because such courses do not carry the Core Theology (CTHL) attribute, they will count toward the Major degree only with prior approval from the Director. Total number of elective courses from outside the TRS Department (including courses taken overseas) must not exceed three credit hours.

Required Courses:

Item #	Title	Credits
THL 1000	Faith, Reason, and Culture	3
	THL Elective	3
	THL Elective	3
	THL Elective	3
	THL Elective	3

Writing and Rhetoric Minor

Program Director: Ellen Bonds, Ph.D.

Office Location: 453 Saint Augustine Center Telephone: 610-519-4657

Website: <https://www1.villanova.edu/villanova/artsci/writingrhetoric.html>

About. As an interdisciplinary program with courses from the Departments of English and Communication, the Program in Writing and Rhetoric offers students opportunities to gain significant knowledge of the rhetorical framework constituting professional, aesthetic and everyday writing. The program will allow students who want to pursue study in writing and communication to do so in a focused and comprehensive way with examination of the theoretical, historical, and philosophical aspects of these disciplines.

MINOR (18 credits). Students must complete 18 credit hours, comprising 6 advanced courses numbered 2000 and above. Also required: A Grammar, Style and Punctuation Exam by the end of their first semester of work towards the minor, students will have studied for and passed a self-administered WebCT exam covering principles of Standard Edited English, a style sheet as that of the Associated Press, and other rules of grammar, punctuation, and mechanics.

Required Courses:

Item #	Title	Credits
	Writing Practice Elective	9
	Composition/Rhetorical/Critical Theory Elective	6
	Upper-Level English Lit	3

Writing and Rhetoric Concentration

Program Director: Ellen Bonds, Ph.D.

Office Location: 453 Saint Augustine Center Telephone: 610-519-4657

Website: <https://www1.villanova.edu/villanova/artsci/writingrhetoric.html>

About. As an interdisciplinary program with courses from the Departments of English and Communication, the Program in Writing and Rhetoric offers students opportunities to gain significant knowledge of the rhetorical framework constituting professional, aesthetic and everyday writing. The program will allow students who want to pursue study in writing and communication to do so in a focused and comprehensive way with examination of the theoretical, historical, and philosophical aspects of these disciplines.

CONCENTRATION (24 credits). In keeping with the English Department's focus on literary texts, the notion of rhetoric informing the Concentration includes textual analysis as well as the more traditional uses of the term, thus bringing the wisdom and imagination of literary discourse into the Concentration. Such a focus on literary texts also underscores the well-known correlation between reading well and writing well. Furthering the Communication Department's focus on orality and persuasion, the Concentration will allow students to develop rhetorically complex understandings of audiences and master of the skills necessary to adapt the written and oral messages for identified audiences.

Program Notes: Non-Credit bearing internships may also possibly fulfil the One Practicum Course requirement if they involve a substantial amount of writing. The internship must be approved by the Director of the Writing and Rhetoric Program. Students must have a 3.0 average or better to enroll in the Concentration. To successfully complete the Concentration, students must achieve a 3.0 average in their Concentration courses.

Required Concentration Courses:

Item #	Title	Credits
	Writing Practice Elective	9
	Composition/Rhetorical/Critical Theory Elective	6
	Writing Practicum Elective	3
	Upper-Level English Lit	3
	Upper-Level English Lit	3

Villanova School of Business

Joyce Russell, PhD, The Helen and William O'Toole Dean

Jonathan Doh, PhD, Associate Dean of Research

Melinda German, M.B.A., Associate Dean, Undergraduate Business Programs

Wen Mao, PhD, Associate Dean of Faculty

Julie Pirsch, PhD, Associate Dean of Teaching & Learning

Jeffrey Kudisch, PhD, Assoc. Dean, Corporate Relations & Executive Education

Office: Bartley Hall 1045, Tel. 610-519-5424

Website: www.business.villanova.edu/

Always be dissatisfied with what you are, if you want to arrive at what you are not yet. Always add some more.

Always keep on walking. ALWAYS FORGE AHEAD!

St. Augustine, SERMON 169, 18

History. The original College of Commerce and Finance was founded in 1922 by Rev. Joseph C. Bartley, OSA. Father Bartley served as dean until his death in 1962. The school was reorganized in 1964 to meet the exigencies of the ever-changing business community. Since that time, it has attracted outstanding undergraduate and graduate students from across the nation and the world. In 2006 the school name was changed to the Villanova School of Business (VSB). Today it offers the Bachelor of Business Administration degree with majors in Accountancy, Economics, Finance, Management, Management Information Systems, Marketing, and Real Estate. Co-majors in Business Analytic and International Business are also available and must be taken in conjunction with another business major. In addition, the Bachelor of Business Administration, Honors degree is also available for qualified students. Graduate programs include the Executive MBA, MBA - Flex Track, MBA – Fast Track, MBA – Online Track, Master of Accounting with Data Analytics, Master of Science in Finance, Master of Science in Church Management, Master of Science in Analytics and a Master of Business Taxation and a JD/MBA offered jointly with the Villanova University Charles Widger School of Law.

The undergraduate and graduate business programs of VSB are fully accredited by AACSB International - the Association to Advance Collegiate Schools of Business. In addition, the accounting program is separately accredited by the AACSB and, as such, is among a select number of accounting programs so designated.

VSB faculty consists over 116 full-time professors, with about eighty-five percent holding the terminal degree in their area of expertise. Adjunct professors are experts drawn from industry. The faculty is widely recognized for its excellence in teaching, research and professional service.

The School is also home to prestigious business research institutes and centers including the Daniel M. DiLella Center for Real Estate, the Center for Business Analytics, the Elenore and Robert F. Moran Sr. Center for Global Leadership, Center for Marketing and Consumer Insights, and Center for Church Management.

Academic Mission. The Villanova School of Business (VSB) fosters an atmosphere where students and our community can develop intellectual curiosity, experiences, and values needed for lifetime learning. We collaborate with the business and academic communities to create, share, and apply knowledge to produce strategic, innovative solutions that solve evolving business programs. Strengthened by our Catholic and Augustinian tradition, VSB is a community of mutual respect, inclusion, professional development, and continuous improvement.

Vision. To create a rigorous academic learning environment that transforms lives, nurtures creativity, embraces an analytical approach, espouses a global perspective and develops ethical leaders who positively impact society.

Core Values

- **Veritas.** Creative problem solvers tackling emerging business challenges with expertise and integrity, paired with courage, resolve, and strength of character.
- **Unitas.** An inclusive community of collaborative leaders who think holistically and work across disciplines.
- **Caritas.** Humble servant leaders who are ethical, empathetic decision makers, focused on the greater good.

Office of Diversity, Equity and Inclusion

Aronte Bennett, PhD

Associate Chair, Marketing and Business Law Dept.

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Director and Founding Committee Member, Villanova Women in Tech
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alicia.strandberg@villanova.edu

The VSB Centers of Excellence

Center for Business Analytics

Dr. Daniel Wright, Faculty Director
Meredith Lockyer, Director

The Center for Business Analytics (CBA) is dedicated to preparing VSB graduates to become analytics leaders in their organizations. The CBA brings together industry executives and world-class faculty to create curricula and experiential programming that positions students to deploy analytics techniques to solve increasingly complex business problems.

Center for Church Management

Matthew Manion, Faculty Director
Daniel Guertin, Associate Director
Chesley Turner, Director

VSB's Center for Church Management (CCM) enables current and future church leaders to steward the human, financial, and other resources of the church by teaching business best practices in a Christian context of mission and ministry. CCM offers the world's first and only Master of Science in Church Management, as well as performing research and conducting non-credit programs in church management throughout the year.

Daniel M. DiLella Center for Real Estate

Dr. Shawn Howton, Faculty Director
Jessica Taylor, Director

The Daniel M. DiLella Center for Real Estate was established to provide outstanding academic and professional development opportunities to Villanova students in the field of real estate. The DiLella Center supports faculty research and teaching, ensuring relevance in the curriculum through the incorporation of site visits, experiential learning projects, industry-standard tools and the perspectives of industry experts.

Elenore and Robert F. Moran Sr. Center for Global Leadership

Dr. Jonathan Doh, Co-Faculty Director

Dr. Michelle Casario, Co-Faculty Director

Kimberly Cahill, Director

The Elenore and Robert F. Moran Sr. Center for Global Leadership serves as a hub of innovation for VSB's international curricular initiatives, faculty research, and service and outreach activities. The Center promotes the guiding principles of cross-cultural awareness, ethical international business practices, and responsible global leadership for the betterment of business and society.

Center for Marketing and Consumer Insights

Dr. Jeremy Kees, Faculty Director

Dr. Ray Taylor, Associate Director, Faculty Initiatives/Senior Research Fellow

Dr. Julie Pirsch, Associate Director, Student Initiatives

Lauren Higgins, Associate Director

The Center for Marketing and Consumer Insights (CMCI) brings together our world-class faculty from the Villanova School of Business with top marketers from leading firms. The CMCI Advisory Council includes professionals at all levels of marketing who believe in sharing knowledge and opportunities to support future marketing leaders. CMCI and the Advisory Council create uncommon learning experiences and a strong community dedicated to supporting positive outcomes for students in marketing.

The Clay Center at VSB
The O'Donnell Center for Professional Development
Bartley Hall, Room # 1054 610-519-5532

The Clay Center at VSB, named in honor of VSB alumnus, faculty member and Dean Emeritus Alvin A. Clay, is a “one-stop-shop” resource where all academic support and informational resources are available to help undergraduate business students reach their goals. These resources help business students to explore and develop their educational and career goals, and to successfully apply their unique talents and knowledge to become a lifelong learner and socially-responsible member of the global business community.

THE CLAY CENTER MISSION. The Clay Center at VSB is dedicated to facilitating the intellectual, professional, and personal growth of all undergraduate VSB and Business Minor students by providing:

- educational planning and academic advising
- professional and personal development programs and resources
- experiential learning opportunities

The Clay Center, a community based on integrity, ethics, compassion and mutual respect, is committed to:

- championing a diverse and inclusive community to create an even greater sense of belonging for everyone
- guiding students as they identify their educational, professional, and personal goals
- empowering students to evaluate and pursue opportunities that support their goals
- creating a culture that promotes student responsibility and accountability
- partnering with the university community to meet the needs of our students
- continuously assessing the needs and interests of our students and the VSB business community, and adapting Clay Center services accordingly.

ACADEMIC ADVISING

Julie Freedman, M.S., Director

VSB employs a four-year, integrative advising program. The VSB advising team consisting of Academic Advisors, Peer Advisors, and Faculty Mentors, facilitates the exploration and development of academic and career goals, and empowers students to be responsible decision-makers and active participants in defining their futures. The advising team is a support system – from

orientation to graduation – that provides exemplary academic resources enabling students to be active members of the Villanova student body and to successfully apply their unique talents and knowledge to become socially responsible members of the global community.

Each incoming first-year student is connected with an Academic Advisor and a Peer Advisor who are available to their advisees throughout their VSB experience. During the first year, advisors support students in their transition from high school to college and assist in curricular planning and development of educational goals. More specifically, advisors provide guidance regarding course selection, registration, and study abroad opportunities, as well as support students as they explore experiential education and service opportunities, choice of major options, and post-graduation planning.

Faculty Mentors have a breadth of knowledge to share regarding why a student would declare a major/minor in a specific field. They are available to all students to offer guidance regarding opportunities and career paths and to suggest elective courses, as well as secondary majors and minors where appropriate, to further support students' interests and deepen their knowledge. Faculty Mentors are available to all VSB undergraduate students throughout their four years.

First-year students must meet with either their Peer Advisor or Academic Advisor each semester during the course registration period to discuss scheduling and to receive their registration PIN. These meetings are critical to ensure that students' progress successfully through their degree program. All students are encouraged to meet with their Peer Advisor, Academic Advisor, and Faculty Mentor at any time throughout the year.

DAVIS FUND FOR STUDENT EXPERIENCES

Caitlin Gilmore, M.A., Associate Director

Many thanks to the generosity of Jim C. Davis '81 VSB and Kim Davis, the Davis Fund for Student Experiences advances VSB's long-standing commitment to experiential learning. The Davis Fund provides financial support to VSB students to encourage engagement in experiences that will enhance academic and professional growth. Some examples that have been funded include global opportunities, research, independent studies, nonprofit service, conferences, case studies and other experiences that reflect the University's mission and values. To learn more about the Davis Fund and the application process, please visit the webpage: business.villanova.edu/davisfund.

For additional information, contact Ms. Caitlin Gilmore, Associate Director, Davis Fund for Student Experiences (caitlin.gilmore@villanova.edu).

THE O'DONNELL CENTER FOR PROFESSIONAL DEVELOPMENT

Brenda Stover, M.S., Assistant Dean

The Clay Center at VSB is home to the Charlotte and James V. O'Donnell '63 Center for Professional Development. The O'Donnell Center helps to deliver the Backpack-to-Briefcase program, provides professional development coaching, coordinates experiential education initiatives, and works closely with VSB faculty, Centers of Excellence, business societies, and the Villanova Career Center to offer career education and employer programs that help students explore areas of interest and prepare for the business world. The O'Donnell Center also manages the undergraduate Mentor Program.

Professional development is incorporated into the core business curriculum through our unique Backpack-to-Briefcase (B2B) program starting in the first year. The program combines class sessions and out of class activities that focus on an introduction to campus career resources, career exploration, developing internship/job search skills and development of soft skills. During the fall of the first year B2B requirements are embedded in the Business Dynamics course that is required of all VSB students, while during the spring semester B2B is delivered through a stand-alone course known as VSB 0099: First-Year Experience. As sophomores and juniors, students enroll in a one-credit B2B course each year.

VSB recognizes the importance of students gaining “hands-on” experience prior to graduation as a critical element of their education and a means of clarifying career goals and increasing marketability upon graduation. VSB students may earn academic credit for approved internships and CoOps. The O'Donnell Center collaborates with campus partners to develop employer relationships and identify externships, internships, and CoOp programs that support students' interests. Guidance on the search for opportunities is provided through individual coaching appointments and the Rise to the Top Experiential Education Workshop Series.

The O'Donnell Center also works with thirty (30) student business societies and the VSB Council of Presidents (student society leadership) to assist the groups in establishing goals, as well as developing and hosting programs and events.

The VSB Mentor Program brings VSB students and alumni volunteers together in one-to-one relationships to support the student's career and professional development goals. Students are invited to participate in the Mentor Program during spring of sophomore year. All student mentees and alumni mentors opt in and are paired based on the student's primary field of interest, desired work location, and mutual areas of interest. Mentors share their knowledge and experience to support mentee's goals and professional development, building a bridge between the classroom and the professional world.

Degree Program

Undergraduate Degree Offered. The Villanova School of Business offers the **Bachelor of Business Administration** degree with majors in Accountancy, Economics, Finance, Management, Management Information Systems, Marketing and Real Estate. In addition, a Business Analytics co-major, and International Business co-major are also available and must be taken in conjunction with another business major. The **Bachelor of Business Administration, Honors** degree is also available for qualified students.

Baccalaureate Degree Requirements. The requirements for the Bachelor of Business Administration (BBA) degree are:

- Completion of all *core curriculum* requirements, *academic major course* requirements, and *elective* requirements for the degree with an overall cumulative quality point average (QPA) of not less than 2.00 and a cumulative technical quality point average of not less than 2.00.
- For transfer students, no more than 60 credits (20 courses) may be transferred into a program including AP, transfer, and study abroad. At least 50% of the business core credit hours required for the BBA degree must be completed at Villanova University.
- The final 30 credit hours of a student's academic program must be completed at Villanova (residency requirement). With permission of the Associate Dean, a student may study abroad during the first semester of senior year.
- Discharge of all financial obligations to Villanova University.

Students are responsible for the degree requirements in effect at the time of their initial enrollment. If they are formally readmitted to VSB, they must meet the requirements of their new graduating class. Transfer students' degree requirements are determined at time of transfer.

A student's eligibility for graduation is determined by the Dean. NOTE: it is the personal responsibility of the student to ensure that all requirements for graduation are met.

Students accepted to the Honors Program may earn the **Bachelor of Business Administration, Honors** degree by successfully completing the following degree requirements:

1. Complete ten (10) 3 cr. Honors courses plus VSB 2121 (1 cr.). At least four (4) of ten (10) 3 cr. Honors courses must be a VSB Honors course:
VSB 1015 Business Dynamics
At least one of the following four required VSB courses must be an Honors course.

- VSB 2004 Financial Accounting
 - VSB 2007 Corporate Responsibility & Regulation
 - VSB 2008 Business Analytics
 - VSB 2009 Principles of Finance
 - VSB 3900 Innovation and Design
 - VSB 4002 Strategic Thinking and Implementation
2. Complete all major courses, core requirements, and elective requirements, and earn at least of 126 credit hours.
 3. Must achieve a minimum of 3.33 cumulative GPA and meet the minimum required technical GPA requirement.

Upon successful completion of VSB 2121, students will have an opportunity to serve as a research associate with a VSB professor for up to three years.

In addition to the course requirements, students will be presented with opportunities to engage with faculty, staff, corporate partners and alumni through a range of personal and professional development offerings. The goal is to provide Honors students with opportunities and challenging intellectual engagement across three areas at VSB:

- VSB Honors Classes
- Intellectual Engagement (research and other faculty engagement)
- Targeted Professional Development Opportunities

<https://www1.villanova.edu/villanova/provost/honors.html>

Basic Curriculum. The curriculum outlined below provides a suggested sequence to complete the baccalaureate degree requirements. However, this suggested sequence should not be viewed as limiting since individual adjustments are made to meet desired educational objectives.

First Year

33 Credits

Course #	Course Name	Cr.
ACS 1000	Ancients	3
ACS 1001	Moderns	3
ECO 100* ¹	Intro to Microeconomics	3
ECO 1002* ¹	Intro to Macroeconomics	3
ENG 1050* ²	The Literary Experience	3
MAT 1400	Business Calculus	4
STAT 1430	Business Statistics	4
PHI 1000* ²	Knowledge, Reality, and Self	3
VSB 0099	Backpack-to-Briefcase: First-Year Experience	0

VSB 1000	Information Technology	1
VSB 1015	Business Dynamics	3
VSB 2004	Financial Accounting	3

Sophomore Year

31 Credits

Course #	Course Name	Cr.
Behavioral Science* ³	PSY or SOC	3
HIS XXXX	History Elective	3
Humanities* ⁴		3
THL 1000* ²	Top: Catholic Studies, OR Top: Faith, Reason, and Culture, OR Top: Global Religious Experience	3
VSB 2000	Backpack-to-Briefcase: SO Seminar (or HON 5003: Shaping a Work Life)	1
VSB 2006	Strategic Information Technology	3
VSB 2007	Corporate Responsibility & Regulation	3
VSB 2008	Business Analytics	3
VSB 2009	Principles of Finance	3
VSB 2020	Competitive Effectiveness	6

Junior Year

31 Credits

Course #	Course Name	Cr.
ECO 3108* ¹	Global Political Economy	3
ETH 2050* ²	The Good Life: Ethics & Contemporary Problems	3
Major Electives	Three Major Courses	9
Computer Science* ⁵ , OR Natural Science* ⁶		3
Computer Science* ⁵ , OR Natural Science* ⁶ , OR Social Science* ⁷		3
VSB 3000	Back-to-Briefcase: Junior Seminar	1
VSB 3006	Principles of Managerial Accounting	3
VSB 3008	Operations Management	3
Non-Business Elective		3

Senior Year**30 Credits**

Course #	Course Name	Cr.
Major Electives	Three Major Courses	9
THL XXXX* ⁸	Theology Elective	3
VSB 4002	Strategic Thinking & Implementation	3
Free Electives* ⁹	Five Free Electives	15

1. **ECO 1001, ECO 1002, and ECO 3108:** are not included in the technical GPA calculation.
2. **ENG 1050, ETH 2050, PHI 1000, THL 1000,** and all **business courses** must be taken at Villanova.
3. **Behavioral Science:** choose from any PSY or any SOC.
4. **Humanities:** choose from Art & Art History, Classical Study, English (2000 level or higher), Humanities, Languages*, Philosophy, Studio Art & Music, or Theater. *If a student completed 2 years of a language (*except Arabic, Chinese, Hebrew, Hindustani, Japanese, or Russian*) in high school, credit for introductory courses in that language taken at the college level will not satisfy degree requirements, including electives.
5. **Computer Science:** choose from CSC 1010, CSC 1035, CSC 1051, CSC 1052, or CSC 1300.
6. **Natural Science:** choose from Astronomy & Astrophysics, Biology, Chemistry, Meteorology, Physics, Geography and the Environment (GEV 1050, GEV 1051, or GEV 1052 only). A science lab is not required.
7. **Social Science:** choose from Criminology, Geography and the Environment, History, Political Science, Psychology, Public Administration, Sociology, or Social Science.
8. **THL XXXX:** choose any core Theology elective.
9. **BL 2185** is recommended for ACC majors who want to sit for CPA certification.

MINORS FOR BUSINESS MAJORS. VSB students may pursue a minor in various business disciplines. See course requirements listed under *Academic Programs* for more detailed information.

NON-BUSINESS MINORS FOR BUSINESS MAJORS. Students enrolled in VSB may pursue minors in programs offered by other colleges of the University, including the Honors Program. Detailed information on the process for approval may be obtained in the department of the discipline of the minor.

Honors and Awards. Awards for distinguished scholarship in VSB are made annually at the Beta Gamma Sigma dinner when the top 10% of the senior class and the top 10% of the junior class are honored. Beta Gamma Sigma is the national scholastic honor society in the field of business administration. Villanova's chapter is one of 157 from among 700 institutions offering undergraduate degrees in business. VSB awards the Bartley Medallion for distinguished scholarship and service each year **at the VSB Graduation Recognition Ceremony, held on the Saturday of Commencement weekend.** Other awards by professional organizations and departments are distributed on a regular basis at appropriate times.

International Study. VSB encourages all students to study abroad. Alliances have been developed between Villanova and numerous institutions abroad. The Office of Education Abroad (top floor Garey Hall, telephone 610-519-6412) provides assistance to students desiring to study in a foreign country through a variety of one semester, full academic year, and summer programs. The courses must be approved in advance as to content and rigor.

Student Business Societies. Student business societies are under the jurisdiction of the Dean of Students, the O'Donnell Center for Professional Development, and the Faculty Advisor of the individual society.

VSB Council of Presidents

Katelyn Tsai '22, President
Sophia Morales '23, Vice President
Eugenia Nocera '24, Vice President

Accounting

Accounting Society

Laura Iacona, Advisor
laura.iacona@villanova.edu

Dr. Danielle Lombardi, Advisor
danielle.lombardi@villanova.edu

National Association of Black Accountants (NABA)

Julius Green, Advisor
julius.green@villanova.edu

Analytics/Technology

Business Analytics Society

Dr. Alicia Strandberg, Advisor
alicia.strandberg@villanova.edu

Sports Analytics Society

Dr. David Anderson, Advisor
david.anderson@villanova.edu

Dr. Bret Myers, Advisor
bret.myers@villanova.edu

MIS Society

Keith Wright, Advisor
keith.wright@villanova.edu

Economics

Economics Society

TBD

Finance

Villanova Finance Group

Stephen Padovano, Advisor
stephen.padovano@villanova.edu

Mergers & Acquisitions Society

Dr. Meg Luo, Advisor
mi.luo@villanova.edu

Society of Women in Financial Training (SWIFT)

Dr. Shelly Howton, Advisor
shelly.howton@villanova.edu

Villanova Wildcat Fund

Stephen Padovano, Advisor
stephen.padovano@villanova.edu

Management

Business and Leadership Society

Dr. Mary Kelly, Advisor
mary.kelly@villanova.edu

Villanova Consulting Group

Stephen Kelly, Advisor
stephen.kelly@villanova.edu

Marketing

Professional Selling Society

Dr. Matthew Sarkees, Advisor
matthew.sarkees@villanova.edu

Villanova Marketing Group

Dr. Matthew Sarkees, Advisor
matthew.sarkees@villanova.edu

Real Estate

Real Estate Society

Jessica Taylor, Advisor

jessica.taylor@villanova.edu

Special Interests

Ascend

Dr. Lucy Chen, Advisor

lucy.chen@villanova.edu

Association of Latino Professionals for America (ALPFA)

Julius Green, Advisor

julius.green@villanova.edu

Business in Entertainment Society

TBD

Business in Healthcare Society

Dr. Katie Iacocca, Advisor

kathleen.iacocca@villanova.edu

Business of Fashion Society

Brenda Stover, Advisor

brenda.stover@villanova.edu

Business Law Society

Dr. Samuel DiLullo, Advisor

samuel.dilullo@villanova.edu

Business Without Borders

Dr. Debra Arvanites, Advisor

debra.arvanites@villanova.edu

International Business Society

Kimberly Cahill, Advisor

kimberly.cahill@villanova.edu

Multicultural Business Association

TBD

Villanova Entrepreneurship Society

Keith Wright, Advisor

keith.wright@villanova.edu

Villanova Instructional Golf Society

Jeffrey Brown, Advisor

jeffrey.brown@villanova.edu

Villanova Women in Business Society

Dr. Mary Kelly, Advisor
mary.kelly@villanova.edu

VSU Book Club

Melinda German, Advisor
melinda.german@villanova.edu

VSU Women of Color Network

TBD

Honors Societies

Beta Alpha Psi Honor Society

Dr. Wayne Bremser, Advisor
wayne.bremser@villanova.edu

Beta Gamma Sigma Honor Society

Dr. Beth Vallen, Advisor
beth.vallen@villanova.edu

Omicron Delta Epsilon International Economics Honor Society

TBD, Advisor

Academic Policies and Information. Unless otherwise noted, VSB follows the general university academic policies and regulations listed in the University section of this catalog. The specific VSB policies are listed in the VSB Undergraduate Handbook, which is available from The Clay Center at VSB. It is the responsibility of the student to know and comply with all academic policies and regulations of the University and the Villanova School of Business. Such policies are subject to change without prior notice.

Academic Programs. Except for co-majors, each VSB major requires six (6) unique courses to fulfill the major requirements. Each VSB minor requires three (3) unique business courses to complete the minor requirements.

Accountancy

Chair: Michael Peters, PhD., Alvin A Clay Professor of Accountancy

Associate Chair: James Emig, PhD.

Office: 3019 Bartley Hall, tel. 610-519-4340

Website:

<https://www1.villanova.edu/villanova/business/departments/accounting.html>

COURSE REQUIREMENTS FOR ACCOUNTANCY MAJOR:

ACC 2310	Intermediate Accounting I
ACC 2320	Intermediate Accounting II
ACC 2360	Federal Income Tax
ACC 2430	Auditing

Plus two (2) **Accounting** elective courses

Please Note: ACC 3430, ACC 3460 (6 cr.), ACC 3470 (6 cr.), and ACC 3500 **do not count** toward **Accounting** elective courses.

Many students are interested in a career in public accounting. Currently, all 50 states and the vast majority of U.S. jurisdictions have adopted the **150 credit** hour requirement. This requirement means that students will need to earn 150 credit hours to become a licensed CPA. **Please note:** Since the VSB undergraduate degree requires 125 credits, it does not prepare students for CPA certification which requires for 150 credits.

There are two approaches to complete 150 credit hours:

- Complete the 150 credit hours as part of an undergraduate curriculum: This approach will require students to overload during the fall and spring semesters and/or take summer classes.
- Complete the 150 credit hours with a master's degree: Villanova offers a Master of Accounting. For some VSB students, it may be possible to earn both a Bachelor of Business Administration (BBA) and a Master of Accounting (MAC) in less than 5 years.

Please discuss these options with your academic advisor.

COURSE REQUIREMENTS FOR ACCOUNTANCY MINOR:

ACC 2310	Intermediate Accounting I
ACC 2320	Intermediate Accounting II

Plus one (1) **Accounting** elective course from the following:

ACC 2340	Accounting Information Systems
ACC 2360	Federal Income Tax
ACC 2410	Accounting for Real Estate
ACC 2420	International Accounting
ACC 2430	Auditing
ACC 2435	Advanced Auditing
ACC 2450	Advanced Accounting
ACC 2470	Cost Accounting
ACC 2480	Advanced Taxes
ACC 3350	Fraud Examination

Business Analytics

Chair: Kevin Clark PhD. Associate Chair: Ward Utter, M.B.A.

Office: 2083 Bartley Hall, tel. 610-519-6924

Website:

https://www1.villanova.edu/villanova/business/departments/management_operations.html

The Business Analytics co-major must be taken in conjunction with a major in Accountancy, Economics, Finance, Management, Management Information Systems, Marketing, or Real Estate.

COURSE REQUIREMENTS FOR BUSINESS ANALYTICS CO-MAJOR:

MGT 3170 Data Mining

MGT 4170 Advanced Analytics

MIS 3060 Business Intelligence and Performance Measurement

Plus two (2) **Business Analytics** elective courses from the following:

ECO 3137^{OBJ} Intro to Econometrics

MKT 2240 Marketing Analytics

Either MIS 3050 CRM & Data Analytics, **OR**

MIS 2030 Database Management

Please Note: Only one course may “double dip” to also fulfill another VSB major.

COURSE REQUIREMENTS FOR BUSINESS ANALYTICS MINOR:

MGT 3170 Data Mining

Plus one (1) course from the following:

MIS 3050 CRM & Data Analytics

MIS 3060 Business Intelligence and Performance Measurement

Plus one (1) **Business Analytics** elective course choosing from:

ECO 3137 Intro to Econometrics

MGT 4170 Advanced Analytics

MIS 2030 Database Management

MKT 2240 Marketing Analytics

Business Law

Chair: Matthew Sarkees, PhD.

Associate Chair: Aronte Bennett, PhD.

Office: 3015 Bartley Hall, tel. 610-519-4350

Website:

https://www1.villanova.edu/villanova/business/departments/marketing_bus_law.html

COURSE REQUIREMENTS FOR BUSINESS LAW & CORPORATE

GOVERNANCE MINOR: Three (3) courses listed below; **two** must be **Business Law** (BL) courses, one of which must be either BL 2135 or BL 2185.

BL 2135	The Business Entity: Law, Governance, & Ethics
BL 2149	Contemporary Topics in Business Law
BL 2160	International Business Law
BL 2185	Law of Contracts and Sales
MGT 2212	Leadership
MGT 2250	Global Corporate Responsibility
MGT 2360	Global Leadership
MGT 2370	Global Business Ethics
RES 2250	Real Estate Law

Economics

Chair: Erasmus Kersting, PhD.

Associate Chair: Mary Kelly, PhD.

Office: 2015 Bartley Hall, tel 610-519-4370

Website:

https://www1.villanova.edu/villanova/business/departments/economics_statistics.html

COURSE REQUIREMENTS FOR ECONOMICS (ECC) MAJOR:

ECO 2101	Macro-Economic Theory
ECO 2102	Micro-Economic Theory
ECO 3137	Intro to Econometrics

Plus three (3) **Economics** elective courses with course number of 3000 or above (except ECO 3108, ECO 3120 and ECO 3130)

BACHELOR OF ARTS, ECONOMICS (ECA) MAJOR: Students in the College of Liberal Arts and Sciences who major in Economics (ECA) earn the degree of Bachelor of Arts in Economics. Students must successfully complete: ECO 1001, CO 1002, ECO 2101, ECO 2102, STAT 1430 (or equivalent), ECO 3137, and five Economic elective courses numbered 3000 or higher. At least one of the electives must be 4000 level or higher to fulfill the capstone requirement.

COURSE REQUIREMENTS FOR ECONOMICS MINOR:

ECO 1001	Intro to Microeconomics
ECO 1002	Intro to Macroeconomics
ECO 2101	Macro Economic Theory
ECO 2102	Micro Economic Theory

Plus one (1) **Economics** elective course above 3000 (except ECO 3108, ECO 3120, and ECO 3130) for VSB students, **OR**

Plus two (2) **Economics** elective courses above ECO 3000 for non-VSB students.

Finance

Chair: Shelly Howton, PhD.

Associate Chair: Benjamin Scheick, PhD.

Office: 2019 Bartley Hall, tel. 610-519-7395

Website:

<https://www1.villanova.edu/villanova/business/departments/finance.html>

COURSE REQUIREMENTS FOR FINANCE MAJOR:

FIN 2114 Intermediate Corporate Finance
FIN 2227 Fixed Income Markets and Valuation
FIN 2323 Equity Markets and Valuation

Plus three (3) **Finance** elective courses

Please note: FIN 3350, FIN 3360, and FIN 3470 (6 cr.) do not count toward Finance elective requirements.

Applied Quantitative Finance Concentration (AQF)

Students intending to major in Finance, may apply to pursue the AQF concentration. All interested students should apply to the AQF program director, Stephen Padovano (stephen.padovano@villanova.edu) by July 15 prior to the start of sophomore year. A second application opportunity will occur for any remaining spots following the Fall semester. The application deadline for the second opportunity is before January 5.

Math Requirements:


MAT 1505 Calculus II (4 cr.)

MAT 2705 Differential Equation with Linear Algebra (4 cr.)

Note: If students receive AP credits for MAT 1505, they must take MAT 3100 (Applied Linear Algebra) or MAT 3400 (Linear Algebra) as the replacement course.

Statistics Requirements:


STAT 4315 Applied Statistical Models

STAT 5700  Math Statistics I

Before taking STAT 5700, students must pass a challenge exam on Double Integrals. (Double Integrals are covered in MAT 2500 – Calculus III).

Computer Science/Analytics:

FIN 2121 Top: Programming Concepts in R (1 cr.)

MIS 2020  Programming for Adaptive Problem Solving

MIS 3080 Applied Machine Learning

Economics Requirement

ECO 3137 Intro to Econometrics

Specific FIN electives for Quant Finance concentration:

FIN 2325 Introduction to Derivatives
FIN EL OPT: 3 cr. Option course choosing from:
FIN 2230 Risk Management of Financial Institutions
FIN 2324 Portfolio Management,
FIN 2326 Market Structure, Trading & Liquidity
FIN 2333 Financial Modeling & Valuation
FIN 2343 Student Managed Funds II
FIN 2340 Top: Quantitative Finance Capstone Course

COURSE REQUIREMENTS FOR FINANCE MINOR:

FIN 2114 Intermediate Corporate Finance
FIN 2227 Fixed Income Markets and Valuation
FIN 2323 Equity Markets and Valuation

International Business

Chair: Kevin Clark, PhD.

Associate Chair: Ward Utter, M.B.A.

Office: 2083 Bartley Hall, tel 610-519-6924

Website:

https://www1.villanova.edu/villanova/business/departments/management_operations.html

The International Business co-major must be taken in conjunction with a major in Accountancy, Economics, Finance, Management, Management Information Systems, Marketing or Real Estate.

COURSE REQUIREMENTS FOR INTERNATIONAL BUSINESS CO- MAJOR:

MGT 2350 Global Business Management

Plus three (3) International Business elective courses (must be from two different disciplines):

ACC 2420 International Accounting
BL 2160 International Business Law
ECO 3109 International Economics
ECO 3127 Economics of Underdeveloped Areas
ECO 4203 Political Economics of Development Aid
ECO 4209 International Macroeconomics
FIN 2335 International Financial Management
MGT 2208 Special Topics in International Management
MGT 2250 Global Corporate Responsibility

MGT 2352 Business in Emerging Markets
MGT 2360 Global Leadership
MGT 2370 Global Business Ethics
MKT 2280 Global Marketing
Or other approved IB electives

Please note: IB co-majors **are required** to take an international course in their major discipline if such course is offered. An international course in each major is required if a student has more than one major. This course will also satisfy a major elective requirement. Also, ECO 3108 (Global Political Economy) is a core requirement and does not fulfill a major elective requirement for IB co-major.

Plus One (1) international-related History or international-related Social Science selected from Geography and the Environment, History, Psychology, Political Science, or Sociology.

Plus competency in a foreign language fulfilled by one of the following:
Successful completion of Intermediate I and Intermediate II if French, Greek, Italian, Latin, or Spanish is chosen.

OR Placement beyond the intermediate levels on language placement exam administered by the Classical & Modern Languages department.

OR Successful completion of two semesters of Arabic, Chinese, Hebrew, Hindustani, Japanese, or Russian at any level.

If a student completed 2 years of a language (except Arabic, Chinese, Hebrew, Hindustani, Japanese, or Russian) in high school, credit for introductory courses in that language taken at the college level will not satisfy degree requirements, including electives.

Language requirements are waived for all international students whose first language is not English. International experience is waived for all international students.

Plus approved 6-week international experience

COURSE REQUIREMENTS FOR INTERNATIONAL BUSINESS MINOR:

MGT 2350 Global Business Management

Plus two (2) **International Business** elective courses (**must be from two different disciplines**)

ACC 2420 International Accounting
BL 2160 International Business Law
ECO 3109 International Economics

ECO 3127	Economics of Underdeveloped Areas
ECO 4203	Political Economics of Development Aid
ECO 4209	International Macroeconomics
FIN 2335	International Financial Management
MGT 2208	Special Topics in International Management
MGT 2250	Global Corporate Responsibility
MGT 2352	Business in Emerging Markets
MGT 2360	Global Leadership
MGT 2370	Global Business Ethics
MKT 2280	Global Marketing
Or other Approved IB Electives	

Please note: IB minors are required to take an international course in their major discipline if such course is offered. An international course in each major is required if a student has more than one major. This course will also satisfy a major elective requirement. Also, ECO 3108 (Global Political Economy) is a core requirement and does not fulfill an IB minor requirement.

Plus One (1) international-related History or international-related Social Science selected from Geography and the Environment, History, Psychology, Political Science, or Sociology.

Language: If students have two years of a foreign language in high school, the language requirement is waived; otherwise, students are required to take two semesters of a foreign language (minimum 6 credits) at or above the introductory level.

International study experience is OPTIONAL.

Management

Chair: Kevin Clark, PhD.

Associate Chair: Ward Utter, M.B.A.

Office: 2083 Bartley Hall, tel 610-519-6924

Website:

https://www1.villanova.edu/villanova/business/departments/management_operations.html

COURSE REQUIREMENTS FOR MANAGEMENT MAJOR:

MGT 2155 Organizational Behavior

MGT 2350 Global Business Management

VSB 3900 Innovation & Design Practicum

Plus three (3) Management elective courses, except MGT 3300 and MGT 3310

**COURSE REQUIREMENTS FOR MANAGEMENT CONSULTING
CONCENTRATION (MANAGEMENT MAJOR ONLY):**

MGT 3070 Solving Complex Business Problems
MGT 3080 Management Consulting Practicum

Management Information Systems

Chair: Michael Peters, PhD., Alvin A. Clay Professor of Accountancy Associate
Chair: William Wagner, PhD.

Office: 3019 Bartley Hall, tel 610-519-4340

Website: <https://www1.villanova.edu/villanova/business/departments/accounting.html>

**COURSE REQUIREMENTS FOR MANAGEMENT INFORMATION SYSTEMS
MAJOR:**

Choose two of the following:

MIS 2020 Programming for Adaptive Problem Solving
MIS 2030 Database Management
MIS 2040 Systems Analysis and Design

Plus any four (4) **MIS** elective courses from the following:

ACC 2340*³ Accounting Information Systems
MIS 3010 Business Data Communications
MIS 3020 Enterprise Systems and Applications
MIS 3030 Enabling Technologies in E-Business
MIS 3040 MIS Seminar
MIS 3050 CRM & Data Analytics
MIS 3060 Business Intelligence and Performance Measurement
MIS 3070 Emerging Business Technologies
MIS 3080 Applied Machine Learning
MIS 3090 Special Topics in MIS
MIS 3300 AI & Machine Learning for Business

Please note:

1. One MIS elective course can also include MIS 2020, MIS 2030, or MIS 2040.
2. CSC 1052: may satisfy MIS 2020 if this course is not fulfilling the core Arts and Science requirement.
3. ACC 2340 may fulfill an MIS elective only if this course is not also fulfilling an ACC major or ACC minor requirement.
4. Two out of 6 required MIS major courses may be a CSC course.

COURSE REQUIREMENTS FOR ARTIFICIAL INTELLIGENCE AND MACHINE

LEARNING MINOR:

MIS 2020	Programming for Adaptive Problem Solving
MIS 3080	Applied Machine Learning
MIS 3300	AI & Machine Learning for Business

COURSE REQUIREMENTS FOR MANAGEMENT INFORMATION SYSTEMS MINOR:

Choose two of the following:

MIS 2020	Programming for Adaptive Problem Solving
MIS 2030	Database Management
MIS 2040	Systems Analysis and Design

Plus one (1) elective course choosing from the following:

ACC 2340 ^{*3}	Accounting Information Systems
MIS 3010	Business Data Communications
MIS 3020	Enterprise Systems and Applications
MIS 3030	Enabling Technologies in E-Business
MIS 3040	MIS Seminar
MIS 3050	CRM & Data Analytics
MIS 3060	Business Intelligence and Performance Measurement
MIS 3070	Emerging Business Technologies
MIS 3080	Applied Machine Learning
MIS 3090	Special Topics in MIS
MIS 3300	AI & Machine Learning for Business

Please note:

1. One MIS elective course can also include MIS 2020, MIS 2030, or MIS 2040.
2. CSC 1052: may satisfy MIS 2020 if this course is not fulfilling the core Arts and Sciences requirement.
3. ACC 2340 may fulfill an MIS elective only if this course is not also fulfilling an ACC major or ACC minor requirement.
4. One out of three MIS minor courses may be a CSC course.

Marketing

Chair: Matthew Sarkees, PhD.
 Associate Chair: Aronte Bennett, PhD.
 Office: 3015 Bartley Hall, tel. 610-519-4350
 Website:

https://www1.villanova.edu/villanova/business/departments/marketing_buslaw.html

COURSE REQUIREMENTS FOR MARKETING MAJOR:

MKT 2197	Marketing Research
MKT 2375	Marketing Management

Plus four (4) additional Marketing elective courses from the following list:

MKT 2120	Buyer Behavior
MKT 2220	Integrated Marketing Communication
MKT 2224	Professional Selling
MKT 2225	Business Development Leadership
MKT 2230	Marketing of Services
MKT 2235	Sports Marketing
MKT 2240	Marketing Analytics
MKT 2280	Global Marketing
MKT 2285	Social Media Marketing
MKT 2290	Digital Marketing
MKT 2349	Contemporary Topics in Marketing
MKT 4132	Seminar in Marketing

BUSINESS DEVELOPMENT CONCENTRATION FOR MARKETING MAJOR:

MKT 2224	Professional Selling
MKT 2225	Business Development Leadership
MKT 2120	Buyer Behavior OR MKT 2349 Top: Sales for Social Impact

DIGITAL MARKETING CONCENTRATION FOR MARKETING MAJOR:

MKT 2240	Marketing Analytics
MKT 2290	Digital Marketing
MKT 2285	Social Media Marketing OR MKT 2349 Top: Advanced Digital Marketing

COURSE REQUIREMENTS FOR MARKETING MINOR:

Three (3) **Marketing** elective courses, one must be:

MKT 2120 Buyer Behavior **OR** MKT 2197 Marketing Research

Please Note: MKT 3450 and MKT 3470 (6 cr.) do not count toward Marketing major or Marketing minor requirements. CHE 2900 Global Pharmaceutical Industry may fulfill a marketing elective requirement.

Real Estate

Chair: Shelly Howton, PhD. Associate Chair: Benjamin Scheick, PhD.

Office: 2019 Bartley Hall, tel. 610-519-7395

Website: <https://www1.villanova.edu/villanova/business/departments/finance.html>

COURSE REQUIREMENTS FOR REAL ESTATE MAJOR:

RES 2150	Real Estate Fundamentals
RES 2250	Real Estate Law
RES 3150	Real Estate Investments
RES 4150	Real Estate Development

Plus two (2) of the following:

ACC 2410	Accounting for Real Estate
ECO 3112	Public Sector Economics OR ECO 3140 Urban Economics
FIN 2350	Real Estate Capital Markets
RES 2340	Contemporary Topics in Real Estate
RES 3250	Advanced Real Estate Modeling

COURSE REQUIREMENTS FOR REAL ESTATE MINOR:

RES 2150	Real Estate Fundamentals
RES 3150	Real Estate Investments

Plus one Real Estate elective course from the following:

ACC 2410	Accounting for Real Estate
ECO 3112	Public Sector Economics
ECO 3140	Urban Economics
FIN 2350	Real Estate Capital Markets
RES 2250	Real Estate Law
RES 2340	Contemporary Topics in Real Estate

Programs for Non-VSB Students

BUSINESS MINORS. There are two options for students to earn a business minor: the **Academic Year Business Minor** and the **Summer Business Institute**. Both of these programs are application-based and administered by The Clay Center at VSB. The following provides an overview of the two options.

ACADEMIC YEAR BUSINESS MINOR

The **Academic Year Business Minor** is designed for full-time undergraduates enrolled in other Villanova colleges (**Note:** Due to scheduling conflicts, Nursing students should consider the Summer Business Institute program instead of the Academic Year Business Minor program). Students admitted to the program take classes with VSB students during the academic year. Four semesters are typically required to complete the minor.

Applications for the Academic Year Business Minor program are reviewed once per year after spring grades are posted. Acceptance is determined on a competitive basis. Students are required to attend an information session held by VSB before applying. Dates and times of information sessions are posted at the start of the fall and spring semesters on program website.

Applications are available online at business.villanova.edu. The application deadline is May 1st and students are notified of acceptance in late May. Any questions should be directed to The Clay Center at (610) 519-5532 or by email at businessminor@villanova.edu.

All VSB-specific courses must be taken at Villanova. Microeconomics, Macroeconomics, and Statistics (4 cr.) may be taken elsewhere. Pre-approval by the applicant's college is necessary.

The required business courses for the Academic Year Business Minor are:

ECO 1001	Intro to Microeconomics
ECO 1002	Intro to Macroeconomics
VSB 1000	Information Technology (1 cr.)
VSB 1015	Business Dynamics
VSB Option	Choice of one (1) business core course from: VSB 2006, OR VSB 2007, OR VSB 2008
VSB 2004	Financial Accounting
VSB 2009	Principles of Finance
VSB 2020	Competitive Effectiveness (6 cr.)

The statistics requirement may be fulfilled by the one following:

STAT 1235	Intro Statistics II, OR
STAT 1430	Business Statistics, OR
STAT 4310	Stat Methods

Credits from the Academic Year Business Minor program may apply to the degree requirements in the student's primary academic college. Students should confirm with their primary academic advisor.

Students who successfully complete the Academic Year Business Minor program may then pursue an additional VSB minor in Accountancy, Artificial Intelligence and Machine Learning, Business Analytics, Business Law and Corporate Governance, Finance, International Business, Management Information Systems, Marketing, or Real Estate. **Prior to enrolling in any VSB discipline-specific minor courses, VSB approval is required. Furthermore, additional coursework may be required.** See minor course requirements listed under *Academic Programs* for more detailed information.

VILLANOVA SUMMER BUSINESS INSTITUTE

The Summer Business Institute (SBI) is a full-time, ten week accelerated program (typically scheduled from end of May – end of July) created exclusively for non- business majors. SBI, using a cohort-based model, is designed to be completed in one-summer with peers from other non-business majors. SBI is taught by VSB faculty members and covers key business disciplines including economics, accounting, finance, analytics, information technology, ethics, management, and marketing. A professional development course, including events and workshops, completes the curriculum. Courses are taught in an integrated manner, so that the basics of business make sense within the larger context of other professional fields. Villanova students who successfully complete SBI earn a business minor.

SBI Courses include:

SBI 0099	SBI Excel (0 credit)
SBI 1000	Professional Success (1 credit)
SBI 1001	Business-Fundamentals (1 credit)
SBI 1006	Business Law Basics (1 credit)
SBI 2005	Applied Economics (3 credits), OR SBI 3145 Managerial Economics (3 credits) - for those students who have credits for ECO 1001 Intro to Microeconomics
SBI 2007	Analytics and Information Technologies (2 credits)
SBI 3010	Financial Accounting (2 credits)
SBI 3020	Principles of Finance (2 credits)
SBI 3030	Management Essentials (2 credits)
SBI 3040	Principles of Marketing (2 credits)

Application is open to all qualified students and recent graduates from any accredited, 4-year college or institution. Note: International applicants must be matriculated in a full-time program of study at a U.S. institution.

SBI applications will be accepted from December 1 until April 15. Decisions are

made on a rolling basis beginning mid-January; early submission of applications is encouraged. Complete information can be found online at business.villanova.edu/sbi. Questions should be directed to The Clay Center at (610) 519-4570 or via email sbi@villanova.edu.

For Villanova students, SBI credit may apply to the degree requirements in their primary academic college. Students should confirm with their Dean's Office or academic advisor to find out how the SBI coursework may apply. Non-Villanova students should check with their primary institution about how SBI credits may transfer.

Villanova students who successfully complete SBI will earn a business minor and may also pursue an additional VSB minor in one of the following business disciplines: Accountancy, Artificial Intelligence and Machine Learning, Business Analytics, Business Law and Corporate Governance, Finance, International Business, Management Information Systems, Marketing, or Real Estate. **Prior to enrolling in any VSB discipline-specific minor courses, VSB approval is required. Furthermore, additional coursework may be required.** See minor course requirements listed under Academic Programs for more detailed information.

GLOBAL BUSINESS CONCENTRATION for NON-BUSINESS STUDENTS.

The Moran Center for Global Leadership oversees the Global Business Concentration (GBC) with guidance from a GBC Committee of faculty and staff representatives from VSB and CLAS. All non-VSB students are invited to apply to the GBC after successful completion of ECO 1001 (Microeconomics) and ECO 1002 (Macroeconomics). The application process is competitive. Please apply online: <https://Explore.villanova.edu/apply/?sr=20ec0fca-360a-4893-b368-746d7b6fa43c>

COURSE REQUIREMENTS FOR GLOBAL BUSINESS CONCENTRATION:

MGT 2350	Global Business Management
ECO 3108	Global Political Economy

Plus one of the following options:

1. Two (2) international business electives*, **OR**
2. One (1) international business elective combined with an approved international experience (study, research, internship or volunteer experience – 6 week minimum)

* **Note:** Economics majors must take one IB elective outside of ECO courses

International Business Electives**

BL 2160	International Business Law
CHE 2900	Global Pharma Industry
ECO 3109	International Economics
ECO 3127	Econ Underdeveloped Area

ECO 4203	Political Economics of Development Aid
ECO 4209	International Macroeconomics
MGT 2208	Topics in international Management
MGT 2352	Business in Emerging Markets
MGT 2360	Global Leadership
MGT 2370	Global Business Ethics
MKT 2208	Global Marketing

** Other global VSB courses by permission of department chair

Foreign Language Requirement Language proficiency is required: through the intermediate level in French, Italian and Spanish, **OR** through the introductory level in ancient Greek, Arabic, Chinese, Irish, Japanese and Russian. Students proficient in other foreign languages may petition for an exemption from the Core Curriculum Language Requirement subject to the conditions outlined in the CLAS Academic Handbook. Language requirements are waived for all international students whose first language is not English.

| Students are encouraged to take GIS 2000 - Intro to Global Studies or other international social science courses.

Contact Kim Cahill, Director, Moran Center for Global Leadership
kimberly.cahill@villanova.edu; 610-519-3906; 2059 Bartley Hall.

College of Engineering

Michele Marcolongo, Ph.D., P.E., P.E. Drosdick Endowed Dean

Gerard F. "Jerry" Jones, Ph.D., Sr. Associate Dean, Graduate Studies and Research

Andrea L. Welker, Ph.D., P.E., Associate Dean, Academic Affairs

Stephen Jones, Ph.D., Assoc Dean for Student Success, Diversity, Equity & Inclusion

Keith M. Argue, M.S., Assistant Dean, External Relations

(Effective 9/1/2021 and 1/1/2022):

Garrett M. Clayton, Ph.D., Associate Dean for Graduate Studies (9/1)

Noelle Comolli, Ph.D., Associate Dean for Faculty (1/1)

Sylvie Lorente, Ph.D., Associate Dean for Research and Innovation. (9/1)

Office: 310 CEER, tel. 610-519-4940

Website: www.engineering.villanova.edu

History. The second degree granting unit inaugurated at Villanova University was the College of Engineering, which began instruction in 1905 under the name of the School of Technology. It was the fourth engineering program to be established at a Catholic school of higher education in the United States. Dr. A.B. Carpenter, a graduate of Lehigh University, was hired in 1904 to organize and direct the School. He was ably assisted by Rev. James J. Dean, a young faculty member in the sciences. It was their responsibility to develop the curricula, hire faculty and plan the facilities needed. Programs in Civil and Electrical Engineering were the first to be initiated, with a total of twelve students enrolled. In 1908, an undergraduate program in Mechanical Engineering was established; and in 1909, the first engineering bachelor's degrees were awarded. An undergraduate program in Chemical Engineering was established in 1919. In the years following the Second World War, the College expanded its degree offerings to the masters level, establishing graduate programs in each of its four engineering departments. A fifth undergraduate degree program in Computer Engineering was added in 1993. A combined Bachelors/Masters Program is available in all programs. In 2003, a Doctoral Program was instituted in all programs. The undergraduate programs of Chemical Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, and Mechanical Engineering are accredited by the Engineering Accreditation Commission of ABET www.abet.org. The College of Engineering is dedicated to supporting the research activities of its faculty and students. This research is conducted through cooperation with government, industry, and private foundations. The college has six established research centers:

Center for Advanced Communications (CAC), Center for Nonlinear Dynamics and Control (CENDAC), Villanova Center for Resilient Water Systems

(VCWRS), Center for Energy Smart Electronic Systems (ES2), Center for Cellular Engineering (NovaCell), and Villanova Center for Analytics of Dynamic Systems (VCADS).

The college also has extensive research programs in computer engineering, electronics, photonics and MEMs devices; nanotechnology, materials and manufacturing; thermal and fluid sciences; sustainable energy systems; stormwater management; and structural engineering.

Academic Mission. Villanova University's College of Engineering is committed to an educational program that emphasizes technical excellence and a liberal education within the framework of the University's Augustinian and Catholic traditions. As a community of scholars, we seek to educate students to pursue both knowledge and wisdom, and to aspire to ethical and moral leadership within their chosen careers, their community, and the world.

We value a spirit of community among all members of the college that respects academic freedom and inquiry, the discovery and cultivation of new knowledge, and continued innovation in all that we do.

Objectives. The College of Engineering strives to prepare its graduates to understand their roles in and make constructive contributions to a technological society, and to provide ethical and moral leadership in their profession and communities. These objectives are accomplished by various methods, but primarily by integrating into the curriculum the values and morality of the University's Augustinian heritage. In addition to being professionally competent, graduates are expected to have an understanding of their professional and ethical responsibilities, the impact on engineering solutions in a global and societal context, knowledge of contemporary issues, and an appreciation of humanistic concepts in literature, the arts, and philosophy.

The College pursues these objectives by:

- Valuing all members of the Villanova community and beyond
- Supporting innovation and excellence in teaching
- Supporting faculty development through research and professional activities
- Emphasizing design and the design process so that the students are exposed to real- world situations
- Graduating students who
- Apply scientific and mathematical concepts and principles to identify, formulate, and solve problems in a real-world context
- Plan and conduct experimental investigations, and analyze and interpret their results
- Function effectively on project teams
- Contribute to teams
- Communicate ideas and information
- Understand the role of the engineering profession and technology, including

- appreciating concepts drawn from the humanities and social sciences
- Embody high professional and ethical standards

Have the motivation and capability to acquire, evaluate, and assimilate knowledge and continue the learning experience
 Appreciate the value of service and other cultures

Degrees Offered. The College of Engineering offers full-time (day) academic programs leading to the following degrees: Bachelor of Science in Chemical Engineering, Bachelor of Science in Civil Engineering, Bachelor of Science in Computer Engineering, Bachelor of Science in Electrical Engineering, and Bachelor of Science in Mechanical Engineering.

The undergraduate programs in Chemical Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, and Mechanical Engineering are accredited by the Engineering Accreditation Commission of ABET, www.abet.org

Minors Offered. The College of Engineering offers the following minors. Details about each minor can be found at <http://www1.villanova.edu/villanova/engineering/undergrad/minors.html>

- Aerospace Engineering
- Biochemical Engineering
- Biomedical Engineering
- Computer Engineering
- Electrical Engineering
- Engineering Entrepreneurship & Engineering Entrepreneurship Summer Institute
- Mechatronics
- Humanitarian Engineering
- Sustainability Studies (joint offering between the College of Engineering and the College of Liberal Arts and Sciences)
- Sustainable Engineering
- Real Estate Development (joint offering between the College of Engineering and Villanova School of Business)

Degree Requirements. The undergraduate engineering curriculum provides the foundation for careers in engineering as well as the basis for further study in engineering and other professions such as law, medicine, business and management. Courses of study concentrate on mathematics, physics, chemistry, engineering science, and engineering analysis and design within a particular engineering discipline.

The curriculum places special emphasis upon developing oral and written communication skills, and it offers opportunities to develop an appreciation of the social sciences and humanities, and the flexibility to pursue minors. Courses in the humanities are included in each curriculum to make the student engineer

more fully aware of social responsibilities and better able to consider non-technical factors in the engineering decision making process. Extensive hands-on laboratory experience and required projects for all seniors ensure professional preparation in the fundamentals of the design process within the real constraints of problem solving. To qualify for a bachelor's degree in the College of Engineering, undergraduate engineering students must successfully complete all of the first year core curriculum courses, those major courses required for the particular engineering degree sought, and a series of electives, as indicated in the following sections. They must also achieve cumulative overall and technical grade point averages of at least 2.00 in their course work.

At least half of all the engineering courses and, normally, the final 30 credits of an engineering bachelor's degree program, must be taken at Villanova University. All undergraduate degree requirements should be completed within a six-year period. NOTE: It is the responsibility of each student to know and to fulfill all degree requirements. To keep the curriculum abreast of the latest engineering developments, Villanova University reserves the right to change the program requirements without prior notice.

Core Curriculum for Students entering in Fall 2018 or later. A requirement for the BS degree in any engineering discipline (entering classes in the Fall of 2017 or later) is the successful completion of the College of Engineering's Professional Development Program entitled the Career Compass. Details of the program can be found at:

<https://www1.villanova.edu/content/villanova/engineering/undergrad/Career-Readiness.html>

All engineering students have a common first semester consisting of the following courses:

- ACS 1000 - Ancients * or ACS 1001 - Moderns * - 3 credits
- CHM 1103 - General Chemistry Lab I - 1 credits
- CHM 1151 - General Chemistry I - 4 credit
- EGR 1001 - Career Compass First Yr A - 0.5 credits
- EGR 1200 - Egr. Interdisciplinary Proj. I - 3 credits
- MAT 1500 - Calculus I - 4 credits
- THL 1000 - Faith, Reason, and Culture - 3 credits

Engineering Curriculum Requirements in Humanities and Social Science

- ACS 1000 Ancients
- ACS 1001 Moderns
- THL 1000 Faith, Reason and Culture
- Theology (THL) course at the 2000 level or above, or course with Core Theology (CTHL) attribute
- Department approved Ethics course
- One 3-credit course from:

- Theology (THL) 2000 level or above, or course with Core Theology (CTHL) attribute
- Philosophy (PHI)
- Peace and Justice (PJ)
- ETH 2050 The Good Life: Ethics & Cont Prob
- EGR 2930 Catholic Social Teaching for EGRS

Electives

All students select their remaining additional program humanities and social science electives from among the courses listed in the University catalog and offered by the following departments/programs.

Humanities	Social Sciences
Arab & Islamic Studies Art History Classical Studies Communication English (ENG 1050, 1975, 2100-9999) Global Interdisciplinary Studies History Honors Program: (eligible Courses and Students only) Humanities Modern Languages (except speaking courses in native language) Philosophy Theatre	Criminology Economics Geography and the Environment* Humanities: HUM designated PSC Peace and Justice Political Science Public Administration Psychology Sociology Gender and Women's Studies *Selected courses

Students should consult their adviser regarding curricular questions.

Transfers and Change of Major. Although all engineering students are enrolled in a common set of first semester classes, each freshman has a designated major corresponding to the department of initial Villanova acceptance. Requests to change majors are considered twice a year. The request to change majors may be found here:

<https://www1.villanova.edu/villanova/engineering/resources/undergraduates/forms/ChangeMajor.html>.

These requests are due December 1st and May 1st. After the freshman year, it is increasingly difficult to change majors as degree curricular requirements become more specialized.

Transfers between degree programs is competitive and space dependent.

Engineering students who wish to change their major to an area outside of engineering must follow the transfer application requirements of that college.

Students who wish to change their major to Engineering from another college within the university must submit their request to change majors using this form:

[https://www1.villanova.edu/villanova/engineering/resources/undergraduates/forms/Change Major.html](https://www1.villanova.edu/villanova/engineering/resources/undergraduates/forms/Change%20Major.html).

These requests are due December 1st and May 1st. Transfers between degree programs is competitive and space dependent.

Honors Degrees. All degree programs have an Honors option. Students pursuing the Honors degree are accepted into the Honors program at admission. These students have additional degree requirements. Honors students are advised by an academic advisor in their department and the Honors Program provides additional advising support.

Degree Programs. Bachelor of Science in Chemical Engineering and Bachelor of Science in Chemical Engineering, Honors.

The chemical engineer typically uses the principles of mathematics, chemistry, biology, physics and engineering sciences to creatively solve technical and commercial problems arising in the design and manufacture of industrial scale processes. These solutions must respond to economic constraints as well as social, ethical, environmental and safety implications. Industrial scale processes can include fuels, bulk chemicals, polymers, foods and pharmaceuticals (including protein, gene and cell-based therapies). A chemical engineer is prepared to evaluate and think critically and can apply these skills in many fields outside of the traditional manufacture and research and development, including finance, management and patent law.

Mission Statement. The Chemical and Biological Engineering Department is committed to providing undergraduate and graduate students innovative and effective educational experiences that will prepare them for the technological, professional, and societal challenges of their careers. Through research that advances engineering and scientific knowledge, the department inspires students and brings value to the university and broader community.

Program Educational Objectives. Consistent with the University's Augustinian Mission that values broadly-educated, and well-rounded individuals, graduates of the Chemical Engineering Program are able to pursue the following career objectives:

- Conduct themselves in a manner that recognizes their professional responsibilities to society in areas such as sustainability, safety, ethics, and environmental protection.
- Apply the underlying scientific principles and technical capabilities needed to succeed in both the traditional and emerging fields of the chemical

- engineering profession.
- Continue to learn and grow by leveraging professional opportunities that facilitate the effective practice of their chosen profession.

Curricular Philosophy. The early years of the chemical engineering curriculum emphasize the basic principles of natural and engineering sciences. Later courses use these principles to develop skills in chemical engineering design including the solution of open-ended problems requiring the exercise of judgment, and constrained by economics, safety, reliability or other requirements. Courses gradually develop the students' abilities, with the complexity of design experiences systematically increasing throughout the required courses in chemical engineering science and culminating in the senior process design and process controls courses.

Electives in the junior and senior years allow the student to tailor the program toward career goals. In the senior year, the student can develop the ability to work independently by carrying out an engineering research project. All stages of the curriculum apply computers in various modes, ranging from programming personal computers for the solution of simple problems, through the use of computers for process monitoring and control, to the use of sophisticated software packages for process design.

The curriculum includes several chemical and biological engineering and science electives, to be chosen from a list of approved courses under the guidance of a faculty member designated as the student's academic adviser.

More information on the Chemical Engineering program, visit:
<http://www1.villanova.edu/villanova/engineering/undergrad/majors/chemical.html>.

Bachelor of Science in Civil Engineering and Bachelor of Science in Civil Engineering, Honors. Civil engineers are involved in the planning, design, construction, and operation of facilities essential to modern life such as dams, bridges, highways, buildings, airports, harbors, river and shore protection, drinking water supplies, wastewater treatment, solid and hazardous waste management and disposal, offshore structures, and space platforms. Because these projects are often of a magnitude that affects large segments of the population, the responsibility of the civil engineer extends beyond mere physical facilities into the social, political, and economic welfare of those they serve.

Mission Statement. Villanova University's Department of Civil and Environmental Engineering provides our students with a high quality, contemporary, broad-based, personalized civil engineering education within the Augustinian, humanistic context. We prepare our students for professional practice, graduate study, and life-long learning.

Program Educational Objectives. Three to five years after graduation, we expect our graduates to be able to:

- Use their broad-based civil engineering backgrounds to perform as engineers in construction, environmental, geotechnical, structural, transportation, water resources, or general civil engineering.
- Succeed in graduate school in the disciplines listed above or closely related disciplines, as well as other areas such as business and law.
- Continue the process of life-long learning as required for long-term personal and professional growth.
- Serve society by being ethical members of their professional community.

- Use technical and interpersonal skills to help themselves and their employers succeed.
- Relate their personal and professional lives to the Augustinian, humanistic tradition.
- The broad-based curriculum provides flexibility and meets student needs through a selection of electives.

More information on the Civil Engineering program, visit:

<http://www1.villanova.edu/villanova/engineering/undergrad/majors/civil.html>.

Bachelor of Science in Computer Engineering and Bachelor of Science in Computer Engineering, Honors. Computer Engineering is a discipline that bridges the fields of Computer Science and Electrical Engineering. It may be simplistic to state that computer engineers “build computers,” but it is not far from the truth. Computer engineers are unique in having the balanced skills to bring the hardware and software work together. Building computers alone does not begin to describe the scope of what computer engineering is. Computers are now embedded in smart phones, drones, wireless networks, internet devices, autonomous vehicles and are an integral part of AI, cybersecurity and machine learning. The Villanova computer engineering program is a balanced program bringing together such fundamentals as computer architecture, networks, operating systems, digital electronics, embedded systems as well as electives in biomedical engineering, machine learning and cybersecurity.

Mission Statement. The mission of Villanova University’s Department of Electrical and Computer Engineering is to empower students to become leaders in their chosen professions and to prepare them for a life of service to others.

Program Educational Objectives. The Program Educational Objectives of the Computer Engineering program are to produce graduates who:

- Use their knowledge, analytical, and design skills to generate and validate sustainable and technically appropriate solutions to practical real-world problems in their chosen profession;

- Communicate and work effectively with others having different roles or responsibilities in their professional work environments;
- Continue to develop their professional knowledge and skills throughout their career;
- Succeed in their careers by practicing their chosen discipline with professionalism, care, and integrity.

The curriculum is structured to provide a thorough foundation in the fundamentals of electrical and computer engineering. Analysis and design are emphasized throughout the curriculum, using a project-based structure to teach students how to work on their own and in teams and to synthesize engineering solutions by utilizing their analytical skills and knowledge. Heavy emphasis is placed on developing oral and written communication skills. The curriculum also provides opportunities for an increased awareness of the broader implications of technology and of the social responsibilities of the profession. The design process is emphasized throughout all four years, and design projects are included in the laboratory courses. The sophomore and junior years include core courses that provide a foundation for the senior year, which includes technical and professional electives and an in-depth design project. The computer engineering curriculum not only provides a solid foundation in the core fundamentals but offers the flexibility for students to pursue other professional interests. The curriculum includes professional electives, free elective, science/math elective, computer engineering track electives, and humanities electives to serve this purpose. Students have used this flexibility to pursue minors in business, mechatronics, computer science, cognitive science, physics, astronomy, mathematics, foreign languages, history, and theology, to name a few; although, applying these electives towards a minor/concentration is not a requirement. In addition, students have used the flexibility of the curriculum to prepare for post-graduate study in medicine, law, business, education, and engineering.

The computer engineering program offers technical elective courses in the following specialized areas: computer architecture, digital signal processing, computer networks, multimedia systems, microcontrollers, digital integrated electronics and microfabrication, embedded systems, and computer security.

Students in the computer engineering program acquire experience with computers and their engineering applications, beginning with the engineering programming and applications course in the freshman year and continuing throughout the curriculum in the sophomore-level fundamentals courses, junior-level core courses, and senior-level technical electives. In addition to the activities and services offered by the university and the College of Engineering, the Electrical and Computer Engineering (ECE) Department provides the following additional services and activities for its students: an academic adviser, to assist students with the implementations of their academic plans; the annual ECE Day program and dinner, to highlight state-of-art topics in the electrical and

computer engineering professions; the ECE Walk-in Tutoring Office, to assist ECE students with their upper-level courses; and college-level and departmental student organizations.

More information on the Computer Engineering program, visit:

<http://www1.villanova.edu/villanova/engineering/undergrad/majors/computer.html>

Bachelor of Science in Electrical Engineering and Bachelor of Science in Electrical Engineering, Honors. Electrical Engineering is traditionally associated with the generation and distribution of power. While this is still true today, the field has branched out into numerous areas that may not be easily identified with electrical engineering, such as radio frequency (RF) systems, telecommunications, remote sensing, signal processing, digital circuits, instrumentation, audio, video and optoelectronics, satellites, GPS, radar and navigation, biomedical engineering and devices as well as renewable energy sources. The Villanova electrical engineering curriculum touches upon every one of these technology areas.

Mission Statement. The mission of Villanova University's Department of Electrical and Computer Engineering is to empower students to become leaders in their chosen professions and to prepare them for a life of service to others.

Program Educational Objectives. The Program Educational Objectives of the Computer Engineering program are to produce graduates who:

- Use their knowledge, analytical, and design skills to generate and validate sustainable and technically appropriate solutions to practical real world problems;
- Communicate and work effectively with others having different roles or responsibilities in their professional work environments;
- Continue to develop their professional knowledge and skills throughout their career;
- Succeed in the careers by practicing their chosen discipline with professionalism, care, and integrity.

The curriculum is structured to provide a thorough foundation in the fundamentals of electrical and computer engineering. Analysis and design are emphasized throughout the curriculum, using a project-based structure to teach students how to work on their own and in teams and to synthesize engineering solutions by utilizing their analytical skills and knowledge. Heavy emphasis is placed on developing oral and written communication skills. The curriculum also provides opportunities for an increased awareness of the broader implications of technology and of the social responsibilities of the profession. The design process is emphasized throughout all four years, and design projects are included in the laboratory courses. The sophomore and junior years include core courses that provide a foundation for the senior year, which includes technical and professional electives and an in-depth design project.

The electrical engineering program offers technical elective courses in the following specialized areas: microwave networks and high-frequency circuit design, digital signal processing, linear integrated electronics, communication electronics, optoelectronics, digital integrated electronics and microfabrication, embedded systems, control systems, electric machines and power systems, electronic measurement and conversion, and renewable energy systems.

Students in the electrical engineering program acquire experience with computers and their engineering applications, beginning with the engineering programming and applications course in the freshman year and continuing throughout the curriculum in the sophomore- level fundamentals courses, junior-level core courses, and senior-level technical electives.

In addition to the activities and services offered by the university and the College of Engineering, the Electrical and Computer Engineering (ECE) Department provides the following additional services and activities for its students: an academic adviser, to assist students with the implementations of their academic plans; the annual ECE Day program and dinner, to highlight state-of-art topics in the electrical and computer engineering professions; the ECE Walk-in Tutoring Office, to assist ECE students with their upper- level courses; and college-level and departmental student organizations.

More information on the Electrical Engineering program, visit:
<http://www1.villanova.edu/villanova/engineering/undergrad/majors/electrical.html>.

Bachelor of Science in Mechanical Engineering and Bachelor of Science in Mechanical Engineering, Honors. Mechanical Engineers apply the principles of solid mechanics, thermal fluid sciences, dynamics and control, material science and manufacturing science to the analysis and design of systems of all types. In applying this technical knowledge to fields such as energy systems, nanomanufacturing and robotics, the mechanical engineer must consider economic constraints and the social and ecological implications of solutions imposed. The mechanical engineering curriculum offers the student an opportunity to pursue educational objectives within the framework of this broad theme.

Mission Statement – We are committed to providing a rigorous educational experience in the discipline of mechanical engineering, graduating well-rounded leaders and life-long learners, who aspire to achieving professional excellence. We are *equally* committed to the discovery, dissemination, advancement and application of cutting-edge research. Inspired by the Augustinian tradition, we value an inclusive and diverse community in which we prepare our students to demonstrate the highest ethical conduct and contribute to the well-being of humankind.

Program Educational Objectives – Our graduates will:

- Be valued members of their organizations because of their skills and abilities as mechanical engineers;
- Solve complex technical problems and/or design systems that are useful to society by applying the fundamental scientific principles that underpin the mechanical engineering profession; Advance in their chosen career paths by utilizing technical, leadership, communication, and interpersonal skills, with the highest ethical standards;
- Apply their knowledge and skills to successfully practice professions of their choice; Demonstrate professional and personal growth by pursuing or successfully completing an advanced degree, professional development courses, and/or engineering certification;
- Be actively engaged in service to their professions and communities, consistent with the tradition of St. Augustine.

The first year of the mechanical engineering program is devoted to laying a foundation of mathematics, physical science, and the general engineering sciences. The final three years are devoted primarily to mechanical engineering topics. The required courses span the field of mechanical engineering, and electives provide the opportunity to pursue specific areas of mechanical engineering in greater depth through technical concentrations which include Mechanics and Materials, Thermal/Fluid Systems, and Dynamic Systems. A student opting for a technical concentration will first take an elective in the junior year which corresponds to his/her selected technical concentration. Each student will then customize the program of study by choosing four courses (12 credit hours) of technical electives in the senior year. To complete the technical concentration, two of these mechanical engineering technical electives must be selected from the designated set of concentration classes. In addition, the student must take the senior laboratory course from his/her technical concentration. A student who completes a technical concentration will have the concentration indicated on his/her transcript. Students who do not opt for a concentration will still take a junior year restricted elective and a senior lab; the four senior year mechanical engineering electives can be chosen freely from all offerings.

The engineering design process is emphasized throughout the program and culminates with a senior year project that requires a synthesis of basic principles learned in previous courses.

Throughout the curriculum the technical courses are balanced by a careful selection of humanities courses to ensure that the effects of technology on society are given due consideration in design.

A faculty adviser is assigned to each student at the beginning of his/her freshman year to provide academic and career guidance for the remainder of the student's years in the program until graduation. The adviser should be consulted regarding such topics as electives, minors or concentrations, graduate studies,

undergraduate research, and completion of degree requirements for graduation.

More information on the Mechanical Engineering program, visit:

<http://www1.villanova.edu/villanova/engineering/undergrad/majors/mechanical.html>.

Academic Policies & General Information

Policies, Procedures and Forms. Unless otherwise noted, the College of Engineering follows the general academic policies and regulations listed in the University section of this Bulletin. It is the responsibility of the student to know and comply with all academic policies and regulations of the University and of the College of Engineering. Such policies may change without prior notice.

Policies specific to the College of Engineering can be found at

<https://www1.villanova.edu/villanova/engineering/resources/undergraduates.html>.

Advising. Starting as a freshman, each student is assigned an academic adviser. The academic adviser is a full-time faculty member of the department of the student's major. If the student continues with the major to which s/he was admitted as an incoming freshman, the faculty adviser will remain unchanged for the full term of the program with a few exceptions. *Thus, it is incumbent upon students to get to know their academic adviser.* The academic adviser can help students adjust to university life or point them in the right direction for answers. Students must consult with their adviser at least once a semester during pre-registration to ensure proper course selection and advancement in the academic program. The academic adviser can assist in helping the student select minors and concentrations, and answer questions about career choices, internships, post-graduation employment, and graduate school. It is important to note that while a student's academic adviser may be called upon for assistance in making decisions, *it is ultimately the student's responsibility to understand the requirements of the chosen degree program and to plan for the orderly fulfillment of graduation requirements.* To this end, at pre-registration time each semester the academic adviser will provide the student with an up-to-date summary of the courses s/he has taken and will be required to take in the future to obtain the target degree.

During the freshman year a student is especially encouraged to speak with his/her academic adviser to learn about the engineering profession. In addition to the academic adviser who can provide career planning advisement and referrals when appropriate, the College of Engineering provides information about the engineering profession through annual sponsorship of programs that inform freshman students about career opportunities available in each major field of engineering.

Grand Challenge Scholars Program. The Grand Challenges—presented by the National Academy of Engineering—are an aspirational vision of what engineering needs to deliver in the 21st century. Its 14 corresponding goals are focused on “continuation of life on the planet, making our world more

sustainable, secure, healthy and joyful.” The Grand Challenges Scholars Program is an engineering education supplement that broadens the reach of undergraduate study. It is open to all engineering majors.

Awards and Honors

Dean’s List: A student who has earned a semester GPA of 3.50 or above; is a full-time student; has completed 12 or more credits with final grades in the semester; and has no N or unreported grades is placed on the Dean's List. Approximately two months after the end of the semester, an appropriate letter of acknowledgement is sent to the student at the permanent address on file with the University.

Dean's Award for Academic Achievement: This award was established to recognize the outstanding academic performance of senior undergraduate engineering students who will graduate within the current academic year. To be a recipient of the Academic Achievement Award, students must have a cumulative grade point average within the top ten percent of their major at the end of the fall term.

Dean's Award for Meritorious Service: This award was established to recognize exceptional service to the College of Engineering by senior undergraduate engineering students who will graduate within the current academic year. To be eligible nominees must be involved in extra-curricular and/or service activities within the College for a sustained period. Preference is given to students who demonstrate noteworthy leadership in one or more activities.

Career Compass Professionalism: This award was established in 2016 to recognize students who exemplify professionalism and embrace the core values of the Career Compass program. To be eligible, nominees must attain a satisfactory grade in all six Career Compass courses and must exemplify a strong and vibrant work ethic and commitment to ethical behavior and innovation. Recipients are selected by the Director of Professional Development, College of Engineering

National Honorary Engineering Societies: To recognize and encourage excellence in scholarship, chapters of the following national honorary engineering societies are maintained by the college: Tau Beta Pi, for all engineers; Chi Epsilon, for Civil Engineers; Eta Kappa Nu, for Electrical Engineers and Computer Engineers; and Pi Tau Sigma, for Mechanical Engineers.

Departmental Medallions: At graduation, each department awards a departmental medallion to an exceptional graduate selected by their department.

Robert D. Lynch Award: The Robert D. Lynch Award was instituted in 2003 in

honor of Robert D. Lynch, Dean of the College of Engineering from 1975 to 2000. Given on behalf of the Engineering Alumni Society, this prestigious award acknowledges a graduating senior for his or her outstanding academic achievements and exemplary dedication to serving the community, thus representing the highest values of Villanova University and the College of Engineering.

Computing

College and University Computing. The entire campus is linked via a high-speed network and is connected to the internet. The College also provides virtual desktop which allows students to run Engineering software remotely. IT support is provided by UNIT, the University's IT group, as well as the College's IT group with a walk-in, on-line, and telephone help desk system.

Software and Departmental Computing. The analysis and simulation software Matlab and Mathcad, spreadsheet package Excel, drawing packages SolidWorks and AutoCad, and data acquisition software LabView are available for use. In addition to this, some departments have their own computers and workstations in classrooms and laboratories. Besides computers for data acquisition and control in the laboratories, special purpose computer software is installed on computers throughout the College. For example, the Chemical Engineering Department uses ASPEN-PLUS for simulation of its chemical process systems and makes the software available in computer classrooms. The Civil Engineering Department has a number of industry-specific software packages installed on its computers including STAAD and SIM Traffic. SIMULINK and PSpice are used among many other packages in the Electrical and Computer Engineering Department. In the Mechanical Engineering Department the students use ANSYS and Fluent for finite element analysis and computational fluid dynamic simulations.

Laboratory Facilities. Dedication of the Center for Engineering Education and Research (CEER) took place in June 1998. The multi-million dollar facility provides leading edge technological support for teaching and research in the College of Engineering.

The 88,400-square-foot structure houses 30 instructional and research laboratories, a computer-aided engineering center, an interdisciplinary student projects laboratory, student group study rooms, a multi-media lecture hall seating 140, and conference rooms.

The Chemical Engineering Department's laboratories provide opportunities for students to integrate fundamental principles in thermodynamics, fluid mechanics, heat transfer, mass transfer and reaction kinetics with hands-on experimental planning, performance and analysis. Students use state-of-the-art facilities to participate in biotechnology, materials science and catalysis research. Computer clusters support research and a computer-equipped classroom

enhances laboratory, process control and process simulation experiences.

The Civil and Environmental Engineering Department is committed to “hands-on” education in its experimental, computational, and design laboratories. Facilities are currently dedicated to instruction and research capabilities in environmental engineering, geology, soils, structures, transportation, and hydraulics. Facilities support undergraduate instruction as well as both undergraduate and graduate research. The department’s Faris Structural Engineering Teaching and Research Lab provides 5,000 sq ft of useable floor space to test full-scale structural members up to 90 feet in length and includes two smaller laboratories for testing construction materials under various environmental conditions. The university campus is also used as a working laboratory for education and research on stormwater management, through a vast network of interconnected sensors.

The Electrical and Computer Engineering Department laboratory facilities are available to serve as important components of study in specialized areas as well as for core studies. Laboratories are currently in place for instruction and research in Control Systems, Digital Systems and Microprocessors, Electronics, Signal Processing, Solid State Devices, Microwaves, Microcontrollers, Advanced Electronics, Advanced Computer Systems, Antenna Anechoic Chamber, Antenna Research, Communications, and Student Projects.

The Mechanical Engineering Department laboratories provide an environment for students to reinforce their understanding of the fundamental principles of mechanical engineering and apply that knowledge in experimental analysis and problem-solving. Their laboratories include Manufacturing Processes, Thermodynamics, Engine Testing, Materials Testing and Material Science, Control, Vibration, Stress, Heat Transfer, Fluid Mechanics, and Wind Tunnel.

Student Organizations. To encourage close contact between our engineering students and practicing professional engineers, and to assist students in establishing their engineering identity, the College of Engineering maintains student chapters of many engineering professional societies. These groups, with the cooperation and support of the faculty and practicing professional engineers, organize and sponsor meetings, guest speakers, and field trips of interest to engineering students.

More information on the many student organizations can be found at: <http://www1.villanova.edu/villanova/engineering/undergrad/organizations.html>.

The broader professional and social interests of all engineering students are served by the Villanova University Engineering Student Council. Membership in this organization is open to all undergraduate engineering students.

Departments:

Chemical and Biological Engineering Chair: Dr. Noelle Comolli

Office: 217 White Hall, tel. 610-519-4950

Courses:

www1.villanova.edu/villanova/engineering/resources/catalog/courses/ug_che.html

Civil and Environmental Engineering Chair: Dr. Eric Musselman

Office: 139 Tolentine Hall, tel. 610-519-4960

Courses:

www1.villanova.edu/villanova/engineering/resources/catalog/courses/ug_ce.html

Electrical and Computer Engineering Chair: Dr. Bijan Mobasseri

Office: 411 Tolentine Hall, tel. 610-519-4970

Courses:

www1.villanova.edu/villanova/engineering/resources/catalog/courses/un_ece.html

Mechanical Engineering Chair: Dr. Sridhar Santhanam

Office: 131 Tolentine Hall, tel. 610-519-4980

Courses:

www1.villanova.edu/villanova/engineering/resources/catalog/courses/ug_me.html

For more information on our Academics and Programs, visit:

<https://www1.villanova.edu/university/programs.html#filter=.bachelors.engineering>

College of Nursing

Donna S. Havens, Ph.D., FAAN, RN, Connelly Endowed Dean and Professor

Bette Mariani, Ph.D., RN, ANEF, FAAN, Vice Dean for Academic Affairs

Marguerite K. Schlag, EdD, RN, Associate Dean of the Graduate Nursing Program

Catherine P. Lovecchio, Ph.D., RN, Associate Dean for the Undergraduate Program

Peter Kaufmann, Ph.D., FABMR, FSBM, Associate Dean for Research and Innovation

Patricia Bradley, PhD, RN, FAAN, Associate Dean for Inclusive Excellence

Anne M. Fink, Ph.D., RN, CNE, Assistant Dean for College and Student Services

Evelyn Lengetti, PhD, RN-BC, Assistant Dean of Continuing Education

Maria Pavelsky, MBA, Assistant Dean, Finance & Administration

Office: Driscoll Hall, tel. 610-519-4900

Website: www.nursing.villanova.edu

Course descriptions: www.catalog.villanova.edu/courses/nur.html

The health care of a complex and technologically advanced society requires professional nurses who are liberally educated, clinically competent, compassionate and ethically motivated. In responding to these objectives, the College of Nursing is a tangible expression of Villanova's mission, values and commitment to human service.

History. Villanova University first responded to society's need for baccalaureate-prepared nurses in 1932 when it offered a program of study leading to a Bachelor of Science in Nursing Education. This commitment was expanded in 1953 to create a College of Nursing that now offers a 4 year BSN program, a BSN completion program for registered nurses, an accelerated BSN program for second degree students, an MSN program, a PhD program, a Doctor of Nursing Practice program and a Continuing Education Program.

Baccalaureate nursing education prepares individuals for professional nursing practice in a variety of health-care settings and for continuous personal and educational growth, including entrance into graduate education in nursing. A liberal education is integrated with the ideals, knowledge, and skills of professional nursing practice under the direction of well-qualified faculty.

The M. Louise Fitzpatrick College of Nursing is approved by the State Board of Nursing of the Commonwealth of Pennsylvania. Upon completion of the undergraduate program, graduates are eligible to take the licensing examination (NCLEX-RN) for professional registered nurses. This license is transferable within the United States nationally by state. The BSN, MSN, and Doctor of Nursing Practice programs are fully accredited by the Commission on Collegiate Nursing Education. The Nurse Anesthesia concentration in the graduate program is

accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs. The Continuing Education Program is accredited as a provider of Continuing Education in Nursing by the American Nurses Credentialing Center, Commission on Accreditation.

Contact Information:

American Nurses
Credentialing Center
8515 Georgia Avenue,
#400 Silver Spring, MD
20910
1-800-284-CERT (2378)
www.nursingworld.org/an
cc/.

Commission on Collegiate
Nursing Education
655 K Street NW, Suite 750
Washington, DC 20001
Phone: (202) 887-6791
Fax: (202) 887-8476
www.aacnnursing.org/CCNE

Commonwealth of
Pennsylvania Department
of State Bureau of
Professional and
Occupational Affairs
State Board of Nursing
P.O. Box 2649
Harrisburg, PA 17105-
2649
Phone:(717) 783-7142
Fax: (717) 783-0822
[http://www.dos.state.pa.us/
bpoa/](http://www.dos.state.pa.us/bpoa/)
nursing@pados.dos.state.p
a.us

Council on Accreditation of
Nurse Anesthesia Educational
Programs 222 South Prospect
Avenue
Park Ridge, Illinois 60068-
4001 Phone: (847) 692-7050
Fax: (847) 692-6968
www.aana.com/

Academic Mission. The Fitzpatrick College of Nursing (FCN) is a tangible expression of Villanova University's mission, tradition, and commitment to human service. As a major school of nursing under Catholic auspices, it carries responsibility for the education of nurses within the framework of Christian beliefs and values and the heritage of the Order of St. Augustine. The Fitzpatrick College of Nursing interprets nursing as a healing ministry emanated by love and demonstrated through service and the care of others. As a healing art as well as an applied science and practice discipline, nursing as taught at Villanova University emphasizes the concern for spiritual health as well as that of mind and body. Curricula reflect the integration of these elements and their application in clinical practice, and concern for others regardless of race, ethnicity, or religion. The Fitzpatrick College of Nursing educates individuals for service to a diverse society including all sectors and strata of the population; as such, graduates are prepared to assume roles in all settings where health care is delivered.

Within this context, nursing draws its worth and spirit from motives based on love of one's fellow men and women who are made in the image and likeness of God. As a social service to the community, nursing responds to the needs of the sick, poor and disabled, and promotes wellness as the pre-eminent goal of nursing care. The practice of nursing within a Christian environment requires that those who nurse recognize and respect the needs of each person and that they teach while they nurse in order to assist their patients and the community to achieve the highest possible level of wellness of body, mind, and spirit. The Fitzpatrick College of Nursing, consistent with the mission of Villanova University, assumes responsibility for the education of individuals who will be prepared to provide a vital service to society and who are liberally educated, clinically competent, compassionate, and ethically motivated. The college is committed to providing high quality education in the liberal arts and sciences and expert preparation in the knowledge and clinical skills of professional nursing to qualified individuals who must be prepared and empowered to confront the health care demands of a complex and technologically advanced society.

The FCN views itself as an important locus of education, scholarship, and organizational leadership within Nursing's professional and educational communities. It views with great seriousness its prominent role within the constellation of collegiate nursing programs under Catholic auspices.

The FCN awards the baccalaureate in nursing (BSN) and provides basic preparation in nursing to those who are studying for the first professional degree in the field. Such students include high school graduates with no prior college experience, registered nurses who have not yet attained the baccalaureate, college graduates with degrees in other disciplines who have made a decision to study nursing, and adults who are studying for their first college degree.

The Graduate Program awards the master's degree in nursing (MSN), and post-MSN Certificates and provides preparation and leadership development in selected areas of advanced nursing practice, development of research skills, and knowledge of health policy. In addition, course options prepare individuals for positions as educators, nurse practitioners, and nurse anesthetists.

The Graduate Program administers the Doctor of Philosophy degree in nursing (PhD), which is designed to prepare nurses as educators and researchers for academic careers in higher education. The Ph.D. Program at Villanova is unique in that it focuses on the application of advanced nursing knowledge and scholarly inquiry that address professional and practice concerns related to the learning process.

The Graduate Program administers the post-baccalaureate Doctor of Practice – Nurse Anesthesia (DNP-NA) track which is designed to prepare nurses with a

sound base of theoretical knowledge and clinical experience in the practice of nurse anesthesia and professional leadership. The Graduate Program also administers the post-masters Doctor of Nursing Practice (DNP) Program which is designed to prepare advanced practice registered nurses, including Nurse practitioners, Certified Registered Nurse Anesthetists, Clinical Nurse Specialists, Certified Nurse Midwives and Nursing Leaders with advanced knowledge in evidence-based practice, organizational leadership and financial acumen to lead innovation in nursing practice and healthcare.

The Program in Continuing Education is committed to providing quality programs that enhance the professional growth and update the knowledge base of nurses, other health care professionals, and the public on topics related to health care.

The College of Nursing's emphasis on education in values and ethical principles is a pervasive and central theme and emanates from the Catholic and Augustinian tradition of the University. The faculty are expected to serve as role models and mentors for the professional development of students in the exercise of their academic responsibilities.

Degrees and Programs. The College awards the baccalaureate degree in nursing (BSN) and provides basic preparation in nursing to those who are studying for the first professional degree in the field. Such students include high school graduates with no prior college experience, registered nurses who were prepared in hospital or community college programs and who wish to attain the baccalaureate, college graduates with degrees in other disciplines who made a later decision to study nursing, and mature adults who are studying for their first college degree.

The Graduate Program awards the master's degree (MSN) and provides preparation and leadership development in selected areas of advanced nursing practice, development of research skills and knowledge of health policy. In addition, course options prepare individuals for positions as clinical teachers, faculty, nurse practitioners and nurse anesthetists. The Graduate Program also awards the doctoral degree in nursing (PhD) to individuals who are prepared as teacher-scholars for academic careers in higher education and the Doctor of Nursing practice (DNP) for nurse administrators and advanced practice nurses such as nurse practitioners, registered nurse anesthetists, clinical nurse specialists and certified nurse midwives.

The Program in Continuing Education is committed to providing short courses, conferences, workshops and symposia for nurses, other health professionals and the public-at-large on topics related to health care. Some of these programs are developed to update the knowledge of practicing nurses while others provide an academic arena for the sharing and critiquing of papers and ideas relevant to current issues or trends in health care.

Degree Requirements

Bachelor of Science in Nursing Curriculum (136 credits)

FRESHMAN

<i>Fall Semester</i>	<i>credits</i>	<i>Spring Semester</i>	<i>credits</i>
CHM 1131	3	CHM 1134	3
CHM 1107	1	CHM 1108	1
ACS 1000	3	ACS 1001	3
NUR 1102	2	NUR 1104	2
PSY 1000 or SOC 1000	3	SOC 1000 or PSY 1000	3
THL 1000 or PHI 1000	3	PHI 1000 or THL 1000	3
		ENG 1050	3
SOPHOMORE			
BIO 1205	4	BIO 1206	4
BIO 1181	3	NUR 2810	3
NUR 2204	2	NUR 2206	2
NUR 2205	1	NUR 2207	2
PSY 3200	3	Elective*	3
NTR 2120 OR MAT 1250 OR Elective*	3	NTR 2120 OR MAT 1250	3
*Must be selected from the areas of History, Political Science, or Economics in consultation with the student's major adviser.			
JUNIOR			
NUR 3114	6	NUR 3118	3
NUR 3115	6	NUR 3119	3
NUR 3108	3	NUR 3120	3
NUR 3030	3	NUR 3121	3
		NUR 3122	3
		PHI 2115	3
SENIOR			
NUR 4104	3	NUR 4112	3
NUR 4105	3	NUR 4113	5
NUR 4108	3	NUR 4116	2
NUR 4109	3	NUR 4117	3
NUR 4114	2	NUR 4200	1
THL Elective**	3	Elective*	3

**2000 level or above is recommended

*Students are required to select three electives: One upper level Theology (in addition to Theology 1000), one Social Studies (selected from the areas of History, Political Science, or Economics) and one free elective in an area of the student's interest.

Program Requirements. Entrance physical examination, selected diagnostic tests, as well as designated immunizations, are required of all nursing students. Additional or repeated health screening tests are required prior to entry into clinical experiences. Students are required to be certified in Basic Cardio-pulmonary Resuscitation prior to enrolling in NUR 2207. Continuing re- certification is the responsibility of the student throughout the remainder of the program. As a prerequisite to entry into the nursing program, all students are required to have criminal background checks that comply with the Older Adults Protective Services Act and Child Protective Services Law, as well as urine drug screening, child abuse clearance and FBI fingerprinting.

All nursing students are required to participate in a battery of standardized tests to assess nursing knowledge prior to graduation. The cost is assumed by the students. Permission to take the NCLEX Licensure exam may be delayed based upon a student's academic record and performance on the standardized tests.

Registered nurse students must furnish evidence of malpractice liability insurance.

Global Health Minor. The College of Nursing offers a Global Health Minor which aims to educate students about the factors that influence health and the inter-disciplinary response to addressing global health challenges. The minor is open to all undergraduate students who are sophomore level or above. Minor consists of 15 credits which includes required and elective classes. Students who wish to participate in the Global Health Minor must meet with the Global Health Minor advisor, currently the Director of the Center for Global and Public Health in the College of Nursing, to discuss their course of study to assure that the student is able to meet all requirements.

Academic Policies and Information. Unless otherwise noted, the College of Nursing follows the general university academic policies and regulations listed in the University section of this *Catalog*.

It is the responsibility of the student to know and comply with all academic policies and regulations of the University and of the College of Nursing and to abide by the professional standards established by the College. Such policies may change without prior notice.

Note: if a student withdraws from the College of Nursing and is readmitted at a later date, the requirements in effect at time of readmission will be applied. Policies and regulations specific to Nursing students include the following:

Academic Advising. Every student entering the College of Nursing is assigned a faculty adviser. It is the responsibility of the student to contact his/her adviser prior to each registration period and if he/she is experiencing any academic difficulty. Each student must take responsibility to meet with his/her adviser on an ongoing basis. Advisers are available during posted office hours or by appointment. If the student experiences difficulty in contacting his/her advisor, there is a Student Success and Retention Advisor available to see a student during regular office hours.

Academic Grievance Procedure. If a student has a grievance within a nursing course, they are advised to speak with the individual teaching the course. If the problem is not resolved at this level, it may be taken to the Course Leader, Program Director, Associate Dean of the Undergraduate Program in that order.

Academic Policies. Students are expected to abide by the policies and professional standards established by the College of Nursing. The College of Nursing reserves the right to change program requirements without prior notice to reflect advances in the professional field. If a student withdraws from the College of Nursing and is readmitted at a later date, the requirements in effect at the time of readmission will be applied.

A grade of "C" or better must be attained in all nursing courses for progress in the nursing major.

Students must achieve an examination average of 73% or better in all nursing theory courses that are paired with a lab or clinical course or have clinical as a component of the course. The course numbers are: NUR 2204, NUR 2206, NUR 3114, NUR 3118, NUR 3120, NUR4104, NUR 4108, and NUR 4112.

The student must also achieve a 73% or better in the overall course grade. Only one nursing course may be repeated in the curriculum prior to dismissal from the program.

A required course may be repeated once prior to dismissal from the program. *BSNExpress* students who receive less than a "C" in a nursing course may continue to pursue a BSN in the traditional BSN program.

Students must complete, in sequence, the required lower division courses, with a Q.P.A. of 2.0 in order to advance to junior level courses with a clinical component. Students who receive less than a "C" in BIO 1205, BIO 1206 or NTR 2120 will be required to repeat the course(s) before advancing to the Junior level nursing courses. Students must successfully complete, in sequence, courses in the nursing major as indicated in the curriculum plan. Students who study on a part-time basis are required to successfully complete the theory class prior to enrolling in the associated practicum course.

The College of Nursing reserves the right to place on probation or withdraw any student

whose performance is deemed unsatisfactory.

Students for whom English is not the primary language or not the language spoken in the home will be encouraged to bring translation dictionaries to their examinations and be given extended time on tests.

Extended time is equivalent to time and one half of the usual testing time. Students are expected to self-identify to the course faculty.

International students, who are in the BSN program or RN completion program but who are not expatriates residing permanently or working in the United States and will not sit for NCLEX but return to their countries, may have the progression policies suspended, on a case by case basis, by action of the Dean of the College of Nursing and upon formal recommendation of the Program Director.

Preparation for Registered Licensing Examination:

For the purpose of continuously preparing nursing students in the baccalaureate program leading to initial licensure as registered nurses for the comprehensive licensing examination (NCLEX-RN), standardized tests developed for this purpose will be administered and evaluated as part of the final course grades beginning in the sophomore year (or its equivalent) at the student's expense.

All senior nursing students (or the equivalent) are required to demonstrate successful achievement on a designated predictive NCLEX-RN readiness assessment examination prior to graduation. This examination, in combination with any required remediation, must be successfully completed as a prerequisite to certification by the College as part of the application process for state licensure.

Academic Probation and Dismissal

Probation. A student is placed on academic probation in the College of Nursing when:
A required course is failed.

A grade less than C is earned in science or nursing courses.

The QPA is below 2.0 in any given semester.

“Students who are on probation for earning less than a C in a science or nursing course must complete a mandatory plan of study as determined by the Academic Standing and Records Committee. Students who do not complete this plan will remain on academic probation.”

Dismissal. Students are usually permitted two semesters of probationary status prior to dismissal from the program. A dismissal from the College may be appealed in writing. Detailed instructions for appeal are outlined in the dismissal letter.

Admission

Regular Students. All applicants for full-time or part-time study must meet the entrance requirements for admission to the University as listed in this *Catalog*.

Transfer Students. Transfer students with a 3.0 Q.P.A. are considered for admission to the College of Nursing on a limited basis. Please see the section on *Transfer Students* in the general University section of this *Catalog*. Further inquiries should be directed to the College of Nursing.

Second Degree Applicants. The College of Nursing welcomes applications from prospective students who wish to begin preparing for a career in nursing. These include individuals who possess undergraduate and/or graduate degrees in other fields. . Part-time study is possible during the introductory level of the program when pre-requisites are being completed. Full-time study is required during the clinical portion of the program. All applicants must meet the entrance requirements for admission to the University. This track offers an accelerated curriculum for individuals with a bachelor's degree in another discipline. Applicants must demonstrate superior academic achievement in prior course work to be eligible for this program. Further inquiries should be directed to the College of Nursing.

Registered Nurse Students. The RN to BSN online track will officially close December 2021. Current students have been provided with a teach-out plan and should contact Dr. Margaret Lyons, the Program Director, with any questions.

Admission to Closed Sections of Courses. **Students will not be permitted to enroll in closed sections. Exceptions to this rule will be made only by the Associate Dean of the Undergraduate Program and only when a student must enroll in the specific section in order to complete requirements which are necessary for progression in the program.**

Graduate Course Registration for Undergraduate Students

A junior or senior with a 3.00 cumulative quality point average wishing to enroll in a graduate course must have the written approval of the Associate Dean of the Undergraduate Program before submitting a request to the Associate Dean of the Graduate Program. A student who wishes to take NUR 8904 Research in Nursing requires a GPA of 3.5.

International Studies. The College of Nursing, in conjunction with the Office of Education Abroad, is pleased to offer a variety of opportunities for a Nursing major to study in an overseas university during her/his course of studies.

The College of Nursing has established a year-long study abroad program with the University of Manchester, Manchester, England. Students in this program spend their entire sophomore year in England. The courses transfer to Villanova as the sophomore year of the nursing curriculum and students graduate on time with their classmates.

The program requires some changes in the freshman course of study; any freshman who is interested should contact the Associate Dean of the Undergraduate Nursing Program or his/her academic adviser as early as possible. Nursing students may participate in international opportunities offered by the College of Nursing as elective experiences. A nursing major may also participate in any of the summer or semester study abroad programs approved by the University and administered by the Office of Education Abroad. However, since these are not nursing programs, students who participate need to change their course of study and may graduate later than their graduation class. Interested students should see the detailed discussion of International Studies in the Villanova University section of this *Catalog* or contact the Office of Education Abroad, Middleton Hall, second floor, (phone 610-519-6412).

Withdrawal from a Course (WX). Until the final day for authorized withdrawal from courses, approximately three and a half weeks following mid-term break (for exact date, see the academic calendar <http://www.villanova.edu/calendar/>), students may withdraw from a course without penalty and will receive the grade of "WX". After that date, students seeking withdrawals from courses without penalty ("WX") must present to the Associate Dean a written request with valid reasons for the request, such as serious personal or medical problems, and recommendations from the instructor of the course. The Associate Dean of the College is the final authority for granting or refusing the exception on the basis of the documentation and recommendations submitted. Students who do not have a justifiable cause to withdraw from a course without academic penalty may still withdraw from the course and receive a grade of "W." Withdrawal from a course may alter a student's degree completion date.

BSN Program for Registered Nurse Students

The College of Nursing offers an Online **BSN** track for registered nurses who are graduates of an associate degree or diploma nursing program. The track will close in December 2021 and is no longer accepting applicants.

State Disclosures for Distance Education Programs:

The RN-BSN Online Track is not authorized to offer the RN-BSN program in all 50 states. Information related to state authorization can be found at www1.villanova.edu/main/online-programs.html.

All registered nurse students are expected to have the following on file prior to enrollment in clinical nursing courses:

1. Annual Health Examination, Laboratory Studies, and Urine Drug Screen
2. Current Immunizations.
3. Current CPR Certification.
4. Current R.N. License.
5. Current Malpractice Insurance Certificate.

COLLEGE LEVEL EXAMINATION PROGRAM (CLEP). Students in the College of Nursing's RN-BSN Online Program can gain credits by means of the CLEP Subject examinations as long as:

The credit is applicable to the BSN degree for RN students only.
Credit is given for the Subject Examinations and NOT for the CLEP General Examinations.

NOTE: Villanova University considers credits earned through CLEP Subject Examinations as transfer credit. No more than 9 credits may be earned through the College Level Examination Program (CLEP). A score of 60 or higher on the subject examination is required in order to earn credit. The student transcript will carry a notation of credit for the courses specified but will not carry a grade. The CLEP Subject Examinations will not have an effect on the cumulative quality point average.

Advisement. The RN to BSN Online Track director advises all RN students.

BSN PROGRAM

FOR RN STUDENTS

COURSE/CREDIT

REQUIREMENTS

PHYSICAL SCIENCES/MATH

20 Credits

Anatomy & Physiology.8 cr.
Chemistry or Biology.....3 cr.
Microbiology and
Genetics or General Biology ...3
cr. Nutrition 3 cr.
Statistics 3 cr.

HUMANITIES

12 Credits

English/Literature.....3 cr.
Philosophy-Health Care Ethics.. 3
cr. Theology 3 cr.
Humanities Electives..... 3 cr.

SOCIAL/BEHAVIORAL

SCIENCES

18 Credits

General Psychology.....3 cr.
Human Development 3 cr.
Introductory Sociology.....3 cr.
Electives* 9 cr.
(Social Behavioral Sciences)*

NURSING

74 Credits

Nursing Credit Transfer.....32 cr.

Clinical Decision-Making
Assessment* 12
cr.
NUR 3000..... 3 cr.
NUR 3007..... 3 cr.
NUR 2810** 3 cr.
NUR 3122..... 3 cr.
NUR 4112..... 3 cr.
NUR 4113..... 5 cr.
NUR 4114..... 2 cr.
NUR 4116..... 2 cr.
NUR 4117..... 3 cr.
NUR 4118..... 3 cr.

TOTAL CREDITS – 12

Facilities for Instruction and Practice. The University assumes full responsibility for providing the instruction throughout the entire program. (Students are responsible for their own transportation to and from the various facilities utilized for the practice of nursing.) Community based practice of nursing will most likely require individual means of transportation for agency and home visiting. During the professional portion of the curriculum, theory and laboratory are directed by faculty members. Among the agencies used for student experience are the following:

- Abington Hospital – Jefferson Health, Abington, PA Einstein Medical Center, Philadelphia, PA
- Alfred I. DuPont for Children, Wilmington, DE Belmont Behavioral Hospital, Philadelphia, PA
- Bryn Mawr Hospital – Mainline Health System, Bryn Mawr, PA Children's Hospital of Philadelphia, Philadelphia, PA
- Crozer-Chester Medical Center, Chester, PA Fox Chase Cancer Center, Philadelphia, PA
- Holy Redeemer Home Care and Hospice Services, Philadelphia, PA Hospital of the University of Pennsylvania, Philadelphia, PA
- Home Care and Hospice – Mainline Health System, Radnor, PA Lankenau Hospital – Mainline Health System, Philadelphia, PA
- Clinical Simulation and Learning Resource Center, Fitzpatrick College of Nursing Mercy Hospital, Philadelphia, PA
- Paoli Hospital – Mainline Health System, Paoli, PA Penn Care at Home, Philadelphia, PA
- Pennsylvania Hospital, Philadelphia, PA
- Penn Presbyterian Medical Center, Philadelphia, PA
- St. Christopher's Hospital for Children, Philadelphia, PA St. Mary's Hospital, Langhorne, PA
- Thomas Jefferson University Hospital, Philadelphia, PA
- Corporal Michael J. Crescenz Veterans Administration Medical Center, Philadelphia, PA

Selected school systems, day-care centers, community health centers, senior citizen centers, and industries are also used.

College of Professional Studies

Christine Kelleher Palus, Ph.D., Dean

David Cregan, O.S.A, Ph.D. Associate Dean Academic Affairs & Strategic Initiatives

Susan Leighton, Assistant Dean, Academic Programs

Pete Watkins, Ph.D, Director, Teaching, Learning and Assessment

Offices: Vasey Hall, First Floor, Telephone: 610.519.4300

Email: cpsinfo@villanova.edu Website: cps.villanova.edu

History. In May 2014, Villanova University created the College of Professional Studies (CPS)— the first new College at the University in 50 years. CPS provides academically rigorous undergraduate degree and certificate programming, as well as professional education —on campus and online—for the adult learner and working professional.

CPS continues Villanova’s century-old tradition of service to adult learners and complements Villanova’s breadth of academic offerings by providing innovative programs with flexible delivery options.

Academic Mission. The College of Professional Studies (CPS) provides an academically rigorous education to high-achieving adults who are balancing educational and professional aspirations with life’s commitments.

Grounded in the Augustinian mission and core values of *Veritas, Unitas, and Caritas*, CPS celebrates the diversity and creativity of all members of our academic community, and seeks to inspire global citizenship, professional excellence, and lifelong learning.

CPS embodies Villanova’s enduring commitment to provide access to academic excellence, and offers premier, relevant, and innovative programs, taught by an engaging faculty of scholars and practitioners.

Vision. We strive to provide a purposeful, transformative, and results-driven education for students at all stages of their lives.

We are committed to a supportive and collaborative educational experience. We want our students to feel empowered and emboldened.

We will be a preeminent hub for innovative professional programming.

Our curriculum is designed to be focused, responsive, and nimble, drawing inspiration from evolving workforce and career trends.

Students served at CPS include working professionals who seek to complete an undergraduate degree or credit-bearing certificate with flexible course options; postgraduates who seek requirements for admission to graduate or professional schools or advanced certifications; senior level high school scholars seeking individual university level courses; and senior citizens (age 65 and over) who

wish to enroll in undergraduate courses for personal enrichment. Degree-seeking students have typically earned a minimum of 15 college credits or completed a minimum of four years post-secondary work experience, military experience, professional education, or a combination of the three.

Academic Advising

Kirstin DeFusco Houtz, M.S., Associate Director, Advising Robyn Dooley, Academic Advisor

Olivia D’Aiutolo Mendenall, M.Ed., Academic Advisor 102 Vasey Hall

Telephone: 610-519-4300

Website: https://www1.villanova.edu/content/university/professional-studies/villanova-cps-experience/advising/advising_support_for_credit.html

Academic Advisors serve a supporting yet vital role to the student’s success at Villanova and thereafter. We seek to cultivate students who are advancing their educational pursuits to be changemakers in the communities. We understand the demands on our student population and first seek to meet them where they are in their journey. By doing so, our goal is to develop and nurture the total person to help students achieve their academic, personal, and professional aspirations.

In line with the mission of the University and College, we adhere to the following enduring commitments:

- To foster academic excellence
- To honor our values and traditions
- To serve our students, alumni, and global community.

Leadership, Internship, and Professional Development Opportunities. The College of Professional Studies offers various opportunities for students to earn academic credit while enhancing professional growth through practical experiences and workshops. Through consultation with their advisor, students can choose from the courses below to complement their undergraduate major curriculum.

CPS 1001 College and Professional Success Strategies. This course is designed to lay the groundwork for first-year students’ success at Villanova and thereafter. Students will gain knowledge about Villanova, acclimate to the academic world, and develop a sense of self-awareness. Class meetings will introduce students to pertinent topics and valuable campus resources that will support and contribute to a successful academic career.

CPS 3400 Internship Practicum. Internships provide concrete opportunities for students to make tangible connections between classroom theory and practical application. Students may earn up to six (6) credit hours for outside-of-the-classroom work while completing corresponding assignments. To be eligible,

students must be matriculated, in good academic standing and have earned at least fifteen (15) credits at Villanova. All internships must be approved by the Director of Academic Programs and faculty chair of the intern’s sponsoring academic area.

CPS Professional Development Courses. CPS offers a series of one (1)-credit workshops to fulfill our commitment to providing innovative, academically rigorous, and relevant educational experiences for our students. These timely courses vary each semester as they are responsive to career trends, the evolving workforce, and global events.

Awards

Dean’s List. At the end of each Fall and Spring semester, the College of Professional Studies officially recognizes its high-achieving students by including their names on the Dean’s List. Students must be matriculated and must complete at least 6 credits of letter grade course each semester with a minimum GPA of 3.50. No S, WX or N grades are permitted in these 6 credits.

College Medallion. The CPS Medallion of Academic Excellence is given each year by the College of Professional Studies in recognition of outstanding achievement in a specific major. It is the highest distinction the College can award to a graduating student and serves as a visible symbol of the significant contributions made by the recipient to the life of our College Community. Medallion recipients are selected based on criteria including cumulative grade point average, academic creativity, and perseverance.

Degrees Offered. The College of Professional Studies offers three undergraduate degrees - Bachelor of Interdisciplinary Studies (BIS), Bachelor of Arts (BA), and Associate of Arts (AA) degree. In partnership with the College of Liberal Arts and Sciences, CPS also offers a Bachelor of Science (BS). These degrees, varied majors, and delivery options provide applicable, relevant, flexible, and engaging courses of study for adult learners.

Degrees	Major	Delivery Option	Credits
Associates of Arts (AA)	n/a	On Campus, Hybrid Online	60
Bachelor of Interdisciplinary Studies (BIS)	-General Studies	On Campus, Hybrid	120
	-Entrepreneurship	Hybrid, Online	120
	-Information Systems and Technology	Hybrid, Online	120
	-Leadership	Hybrid, Online	120
	- Organization Development and	Hybrid, Online	120

Degrees	Management Major	Delivery Option	Credits
	-Public Service and Administration	Hybrid, Online	120
Bachelor of Arts (BA)	English*	On Campus, Hybrid	122
	History*	On Campus, Hybrid	122
	Leadership	Hybrid, Online	122
	Public Service and Administration	Hybrid, Online	122
Bachelor of Science (BS)	Computer Science*	On Campus, Hybrid	127

*Majors offered in partnership with the College of Liberal Arts & Sciences may require daytime classes to complete.

Minor Options. A minor in a specific academic discipline typically consists of 15% or more of the total hours required in an undergraduate curriculum. Courses that satisfy minor curricula may only count in one other area in a student's degree (i.e., LDR 2070 may count for both Leadership minor and ODM major). In addition to the four minors below, CPS students have the option of pursuing minors housed in other colleges across Villanova. Students must adhere to all guidelines outlined by the issuing college and/or department. To declare a CPS minor, please complete the Change to Major/Minor Form.

Minors	Delivery Options	Credits
Entrepreneurship	Online	15
Information Systems and Technology	Online	15
Leadership*	Hybrid, Online	18
Organizational Development and Management	Online	18

*Leadership minor is also available to Army ROTC students enrolled in CLAS. Those students must follow CLAS guidelines of overload and are restricted to one (1) Fast Forward course each semester.

Combined Bachelor/Master Programs. The combined bachelors to masters programs offer exceptional CPS students the opportunity to start taking master's level courses that will count towards both their bachelor's and master's degrees. To be eligible for a combined degree program, students must have:

- a minimum cumulative GPA of 3.0,
- completed all core requirements,
- earned a minimum of 90 credit hours, and
- submit the Combined Bachelor/Masters Program Interest Form found on our website at:

<https://www1.villanova.edu/university/professional-studies/villanova-cps->

experience/advising/advising_support_for_credit/forms_handbooks_and_policies.html

Students are expected to consult with their academic advisors on the applicability of graduate level coursework towards their undergraduate degree. Applications are officially reviewed by the respective graduate program. Students must adhere to all policies outlined the graduate program if admitted into a combined program.

Degrees	Eligible Majors	Credits
BIS/MS in Human Resource Development	-General Studies	147
	-Leadership	147
	-Organizational Development and Management	147
BIS/MS in Software Engineering	- Information Systems and Technology	141
BIS/MPA or BA/MPA in Public Service Administration	-General Studies	150
	-Leadership	150/152
	-Organizational Development and Management	150
	-Public Service and Administration	150/152

Credit-Bearing Certificates. CPS offers four certificate programs designed for post-graduate work or students who have not earned a bachelor’s degree and want to specialize in a particular area.

Certificates	Delivery Options	Credits
Accountancy	On Campus	36
Information Systems and Technology* (two tracks)	On Campus, Hybrid, Online	18
Leadership*	Hybrid, Online	15
Pre-Health Professions	On Campus	30

*Credit-bearing certificate programs that do not require a bachelor’s degree prior to admission transfers seamlessly into an AA or baccalaureate degree program.

Baccalaureate Degree Requirements. Each baccalaureate degree program is made up of three distinct categories: Core Curriculum, Major Requirements, and Free Electives. The Associate of Arts degree is comprised of the Core Curriculum and Free Electives only. Both core and major areas follow specific course curricula; however, students have freedom to choose courses for their free electives (see Free Electives policy). Students must meet the following requirements to earn an associates or baccalaureate degree from Villanova University:

- Earned the minimum number of credit hours of the designated program
- Successful completion of the Core Curriculum, Major Requirements, and Free Electives
- Achieve a 2.0 cumulative grade point average (GPA) for all work taken at Villanova and all work attempted at other universities
- A minimum of half of the Core Curriculum requirements must be fulfilled at Villanova (AA, BA, and BS only)
- A minimum of half of the requirements for the major must be fulfilled at Villanova
- At least 60 credits must be earned at Villanova (Students may transfer in no more than 60 credits towards their Villanova degree including AP, CLEP, ACE, and coursework from other regionally accredited institutions)
- Discharge of all financial obligations to Villanova University.

A student's eligibility for graduation is determined by the Director of Academic Programs. It is the student's responsibility to ensure all requirements for graduation are met.

Academic and Degree Programs

Associate of Arts (60 Credits). The Associate of Arts (AA) is an undergraduate degree program designed for students who want a rigorous and diverse general curriculum. Courses are offered in a broad range of disciplines, such as the humanities, social sciences, math, natural sciences, language, culture, and fine arts. Villanova's AA degree is designed to prepare students for a baccalaureate program of study and follows the College of Liberal Arts and Sciences Core Curriculum. Please see The Core Curriculum section of the catalog for more information on the requirements. Additionally, students can customize their academic plan with electives catered to professional and personal interests.

Associate of Arts Requirements (60 Credits)

Course Number	Course Title	Credits
ACS 1000	Ancients	3
ACS 1001	Moderns	3
PHI 1000	Knowledge, Reality, Self	3
THL 1000	Faith, Reason, and Culture	3
ETH 2050	Ethical Tradition and Contemporary Life	3
ENG 1975	Core Literature and Writing Seminar	3
History	Core History	3
Fine Arts	Fine Arts Requirement	3
Math	Mathematics A & S Core	3
Social Science	Core Social Science	3
Language Proficiency	Achieved either 1.) through the intermediate level in French, Italian, Spanish, or Latin; or 2.) through the introductory level in Ancient Greek, Arabic, Chinese, Irish, Japanese, or Russian. Options available for exemptions based on prior proficiency.	6
Natural Science	Mendel Science Experience - thematically-based lecture	6
Free Electives	Any undergraduate course*	18
Total		60

*See section on Free Electives policy

Bachelor of Arts (122 Credits). The Core Curriculum requirements for the Bachelor of Arts degree can be found in the College of Liberal Arts portion of this catalog.

Bachelor of Science (127 Credits). The Core Curriculum requirements for the Bachelor of Science degree can be found in the College of Liberal Arts portion of this catalog.

Bachelor of Interdisciplinary Studies (120 Credits). The Bachelor of Interdisciplinary Studies (BIS) follows a specific core curriculum which provides flexibility so that adult students may select classes in line with their personal interests and experiences as well as their professional goals from a variety of different disciplines. The BIS core curriculum is designed to supplement a student’s major coursework where students will refine their critical thinking and writing skills through different modes of inquiry. These courses, rooted in the liberal arts, encourage students to discover interrelated patterns throughout the various disciplines to promote active participation within the global community.

Bachelor of Interdisciplinary Studies Core Curriculum (45 Credits)

Course Number	Course Title	Credits
Humanities in Augustinian Tradition (3 Courses, 9 Credits)		
ACS 1000	Ancients	3
PHI 1000	Knowledge, Reality, Self	3
THL 1000	Faith, Reason, and Culture	3
Civic and Ethical Leadership (3 Courses, 9 Credits)		
ETH 2050	The Good Life: Ethics & Contemporary Problems	3
American Perspectives	Courses at 1000+ level with an American perspective	3
Global Perspectives	Courses at 1000+ level with a global perspective	3
Communication and Writing Skills (2 Courses, 6 Credits)		
COM 1100 COM 1101 (Choose one)	Public Speaking Business & Professional Communication	3
ENG 1050	The Literary Experience	3
Quantitative and Scientific Literacy (6 Credits)		
Natural Science	Mendel Science Experience	3
STAT 1260	Elementary Statistics	3
Cultural Appreciation (6 Credits)		
Varies	Cultural studies, diversity requirements, film, fine arts, language, literature, theatre, etc,	6
Core Electives (9 Credits)		
Varies	Courses at 2000+ level in the humanities, sciences, and social sciences	9

Majors

Computing Science (BS - 127 Credits). The Major Requirements and more information about the Computing Science major can be found in the College of Liberal Arts portion of this catalog.

English (BA - 122 Credits). The Major Requirements and more information about the English major can be found in the College of Liberal Arts portion of this catalog.

Entrepreneurship (BIS - 120 Credits). This major is in partnership with [Villanova's Innovation, Creativity, and Entrepreneurship \(ICE\) Institute](#). This major prepares students to expand their knowledge, develop their skills, and convert their ideas into tangible products and organizations that can positively impact society and promote the common good. Guided by the values of curiosity, resiliency, collaboration, and creativity, this major is focused on helping students develop a habit of mind oriented towards innovation and entrepreneurship that is applicable to both work and life. Students will cultivate their ability to accept criticism and experience failure as part of the creative, entrepreneurial process. Additionally, in line with the University's Catholic and Augustinian mission, a focus on ethics, social responsibility, and community as related to entrepreneurial pursuits is woven throughout the curriculum.

Major Requirements (30 Credits)

Course Number	Course Title	Credits
Required Core Courses (3 Courses, 9 Credits)		
ENTR 1000	The Basics of Entrepreneurship	3
ENTR 5000	Innovation, Entrepreneurship, and Community Capstone	3
ODM 2050	ODM 2050 Innovation & Creative Thinking	3
Major Electives (7 Courses, 21 Credits)		
LDR 2010	Strategic Planning for Leaders	3
LDR 2070	Strategy Driven Talent Management	3
ODM 1100	Foundations of Strategic Management	3
ODM 2000	Essentials of Finance and Accounting	3
ODM 2010	Essentials of Marketing	3
ODM 2020	Ethics, Regulation and Social Responsibility	3
PA 3000	Overview of Non-Profit Sector	3
ENTR Practicum*		6
Any courses on Innovation, Creativity, and Entrepreneurship (ICE) list		Varies
EGEN 3100**	Feasibility Analysis for Entrepreneurs [Fall]	3
EGEN 3200**	Product and Service Prototyping [Spring]**	3

EGEN 4100**	Product and Service Prototyping [Fall]**	3
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*The practicum in entrepreneurship counts as 2 courses/6.0 credits

**Venture Development Series | Students must commit to take all three courses in this series on campus, in immediate sequence with their teams (Fall, Spring, Fall).

General Studies (BIS - 120 Credits). A Bachelor of Interdisciplinary Studies with a major in General Studies is the College's most flexible degree path. It does not focus on one specific course of study; however, students can design their own major in collaboration with their advisor.

Major Requirements (33 Credits). Advanced courses, at the 2000 and above level, in humanities, sciences, and social sciences.

History (BA - 122 Credits). The Major Requirements and more information about the History major can be found in the College of Liberal Arts portion of this catalog.

Information Systems and Technology (BIS - 120 Credits). A major in Information Systems and Technology emphasizes the application of computing technology in today's workplace and focuses on developing a combination of technical and business skills. Students are challenged through coursework in programming, system design, and data and information management. At the same time, students focus on information systems as it pertains to business management and leadership.

Major Requirements (30 Credits)

Course Number	Course Title	Credits
Required Core Courses (5 Courses, 15 Credits)		
ISYT 1000	Introduction to Information Systems & Technology	3
ISYT 1100	Data and Information Management	3
CSC 1010	Programming for All	3
CSC 1020	Computing and the Web	3
ISYT 5000	Information Systems Capstone [Prerequisites: ISYT 1000 + ISYT 1100]	3
Major Electives (5 Courses, 15 Credits)		
CSC 1035	Databases for Many Majors	3
ODM 1100	Foundations of Strategic Management	3
ODM 2000	Essentials and Finance and Accounting	3
ODM 2040	Strategic Operations and Process Improvement	3
LDR 2030	Leading with a Digital Mindset	3
CPS 3000	Introduction to Project Management	3

Leadership (BA - 122 Credits; BIS - 120 Credits). A major in Leadership will help

students develop and cultivate a comprehensive set of practical skills to apply to their professional endeavors. The curriculum is designed to investigate and analyze moral and ethical challenges to leadership. Students will learn about theories of leadership and identify the factors that contribute to one's ability to develop, articulate, and sustain a vision as a leader. Students will develop personal, professional, and intellectual skills to act with integrity when faced with ethical dilemmas. Issues most relevant to today's corporate leaders such as globalization, technological and social change, and workforce diversity, inclusion, and equity will be studied.

Major Requirements (30 Credits)

Course Number	Course Title	Credits
Required Core Courses (2 Courses, 6 Credits)		
LDR 2000	Foundations of Leadership	3
LDR 5000	Leadership Capstone [Pre-requisite: LDR 2000]	3
Major Electives (8 Courses, 24 Credits)		
LDR 2010	Strategic Planning for Leaders	3
LDR 2020	Leadership & Community	3
LDR 2030	Leading with a Digital Mindset [Pre-requisite: LDR 2000]	3
LDR 2040	Ethics & Leadership	3
LDR 2050	History of Leadership [Pre-requisite: LDR 2000]	3
LDR 2060	Global Strategic Leadership [Pre-requisite: LDR 2000]	3
LDR 2070	Strategy Driven Talent Management	3
LDR 2080	Leadership Communication [Pre-requisite: LDR 2000]	3
LDR 3400*	Internship Practicum in Leadership [Pre-requisite: LDR 2000]	3
LDR 5940*	Topics in Leadership	3
LDR 5950 */**	Topics in Leadership [Pre-requisite: LDR 2000]	1

*LDR 3400, LDR 5940, and LDR 5950 may substitute for up to six (6) credits of Leadership major elective courses each. These substitutions are dependent on the course topic and will be made at the discretion of the College advising staff.

**LDR 5950 courses can be combined to make fulfill (1) three credit leadership elective course requirement.

Organizational Development & Management (BIS - 120 Credits)

The Organizational Development and Management (ODM) major prepares students to be strategic, ethical, effective, socially responsible, and innovative leaders in corporations and communities. This professionally oriented

curriculum is designed to lay the foundation, equip students with the tools and knowledge to propel them to the next level of their career. Students will identify and analyze the impacts of individual and group behavior on organizational processes and outcomes, understand and appreciate the structure of organizations, and the local and global contexts in which they operate. Students will develop analytical skills and collaborative practices related to strategic organizational management of diverse individuals and teams as well as practice and analyze decision-making processes required in complex business organizations.

Major Requirements (30 Credits)

Course Number	Course Title	Credits
ODM 1000	Foundations of Organizational Behavior	3
ODM 1100	Foundations of Strategic Management	3
ODM 2000	Essentials of Finance and Accounting	3
ODM 2010	Essentials of Marketing	3
ODM 2020	Ethics, Regulation and Social Responsibility	3
ODM 2030	Organizational Decision Making	3
ODM 2040	Strategic Operations and Process Management	3
ODM 2050	Innovation & Creative Thinking	3
LDR 2070	Strategy Driven Talent Management	3
ODM 5000	Organizational Development and Management Capstone	3

Public Service & Administration (BA - 122 Credits, BIS - 120 Credits). Public Administration is the organization and management of people and materials to achieve public purposes. The Public Service and Administration (PSA) major prepares students for career advancement in government and in nonprofit organizations but can be applied more generally as well. In the PSA major, students are introduced to ethical, philosophic, theological, historical, social, and political perspectives that influence the leadership and management of government and nonprofit organizations. This major is offered in partnership with the Department of Public Administration where students gain first-hand knowledge of effective practices in the government and nonprofit sectors as well as experience in networking and professional development. Courses in the major cover topics such as public budgeting, strategic planning, leadership, public policy, ethics, and organizational development.

Major Requirements (30 Credits)

Course Number	Course Title	Credits
PA 1050	Public Administration	3
PA 2000	Public Policy	3
PA 2100	City and Suburb	3
PA 3000	Overview of Non-Profit Sector	3
PA 4100	Public Budgeting	3
PA 4200	Organizational Development	3
PA 6000	Vocation of Public Service	3
LDR 2010	Strategic Planning for Leaders	3
LDR 2020	Leadership & Community	3
LDR 2040	Ethics & Leadership	3

Free Electives. The final component of a student's degree is the Free Electives which are courses that neither satisfy the requirements of the Core Curriculum nor the student's individual Major. The number of Free Electives is dictated by the student's program as they make up the remaining credits needed to fulfill graduation requirements. These courses typically include any undergraduate course offered at Villanova. Free Electives allow students the flexibility to pursue interests outside their chosen major by taking individual courses or declaring a minor. Students are encouraged to discuss how their Free Electives should be utilized with their advisor. CPS has the following guidelines regarding Free Electives:

- A maximum of ten (10) credits in courses fewer than 3-credits (including labs) may be applied to a student's Free Elective area
- Students may petition the S/U grading policy for a maximum of three (3) courses in the Free Electives area
- Students may transfer in a maximum of three (3) LFRE 1000 courses (up to 9 credits) that count in the Free Electives area
- When a student fulfills a Core or Major requirement with a course that exceeds the required credit value, the excess credits will be counted in the Free Electives area.

Minors. The College of Professional Studies offers four undergraduate minors for students who are matriculated within the College. A variation of the Leadership minor is also available to select College of Liberal Arts and Sciences students.

Entrepreneurship. This minor consists of five (5) courses including three (3) required and two (2) electives chosen from the list below.

Minor Requirements (5 Courses, 15 Credits)

Course Number	Course Title	Credits
Required Core Courses (3 Courses, 9 Credits)		
ENTR 1000	The Basics of Entrepreneurship	3
ENTR 5000	Innovation, Entrepreneurship, and Community Capstone	3
ODM 2050	ODM 2050 Innovation & Creative Thinking	3
Major Electives (2 Courses, 6 Credits)		
LDR 2010	Strategic Planning for Leaders	3
LDR 2070	Strategy Driven Talent Management	3
ODM 1100	Foundations of Strategic Management	3
ODM 2000	Essentials of Finance and Accounting	3
ODM 2010	Essentials of Marketing	3
ODM 2020	Ethics, Regulation and Social Responsibility	3
PA 3000	Overview of Non-Profit Sector	3
ENTR Practicum*		6
Any courses on Innovation, Creativity, and Entrepreneurship (ICE) list		Varies
EGEN 3100**	Feasibility Analysis for Entrepreneurs [Fall]	3
EGEN 3200**	Product and Service Prototyping [Spring]**	3
EGEN 4100**	Product and Service Prototyping [Fall]**	3

*The practicum in entrepreneurship counts as 2 courses/6.0 credits

**Venture Development Series | Students must commit to take all three courses in this series on campus, in immediate sequence with their teams (Fall, Spring, Fall).

Information Systems and Technology. This minor consists of five (5) courses including four (4) required and one (1) elective chosen from the list below.

Minor Requirements (5 Courses, 15 Credits)

Course Number	Course Title	Credits
Required Core Courses (4 Courses, 12 Credits)		
ISYT 1000	Introduction to Information Systems & Technology	3
ISYT 1100	Data and Information Management	3
CSC 1010	Programming for All	3
CSC 1020	Computing and the Web	3

Minor Elective (1 Course, 3 Credits)		
CSC 1035	Databases for Many Majors	3
ODM 1100	Foundations of Strategic Management	3
ODM 2000	Essentials of Finance and Accounting	3
ODM 2040	Strategic Operations and Process Improvement	3
LDR 2030	Leading with a Digital Mindset	3
CPS 3000	Introduction to Project Management	3

Leadership. The leadership minor has one required course that serves as a pre-requisite for all advanced courses in leadership. Students may choose five (5) courses from the list of electives below.

Minor Requirements (6 Courses, 18 Credits)

Course Number	Course Title	Credits
Required Core Course (1 Course, 3 Credits)		
LDR 2000	Foundations of Leadership	3
Minor Electives (5 Courses, 15 Credits)		
LDR 2010	Strategic Planning for Leaders [Pre-requisite: LDR 2000]	3
LDR 2020	Leadership & Community [Pre-requisite: LDR 2000]	3
LDR 2030	Leading with a Digital Mindset [Pre-requisite: LDR 2000]	3
LDR 2040	Ethics & Leadership [Pre-requisite: LDR 2000]	3
LDR 2050	History of Leadership [Pre-requisite: LDR 2000]	3
LDR 2060	Global Strategic Leadership [Pre-requisite: LDR 2000]	3
LDR 2070	Strategy Driven Talent Management [Pre-requisite: LDR 2000]	3
LDR 2080	Leadership Communication [Pre-requisite: LDR 2000]	3
LDR 3400*	Internship Practicum	3
LDR 5940 *	Topics in Leadership [Pre-requisite: LDR 2000]	3

*LDR 3400, LDR 5940, and LDR 5950 may substitute for up to six (6) credits of Leadership major elective courses. Substitutions are dependent on the course topic and will be made at the discretion of the College advising staff.

ROTC Leadership. The Leadership minor is available to Army Reserve Officer Training Corps (ROTC) students who are pursuing undergraduate majors in the College of Liberal Arts and Sciences. To declare the minor, students must have a cumulative GPA of 3.0. Eligible students must apply for the Leadership minor through the CPS Policies & Forms website. Once approved, students must meet with their designated advisor in CLAS before registering for courses each semester. Courses are generally taught online and in an accelerated format and CLAS Students are only permitted to take one (1) Fast Forward course in each semester. To graduate with a minor in leadership, ROTC students must take three (9 credits) advanced leadership courses from the list below. ROTC students declaring the Leadership minor do not have to take the LDR 2000 pre- requisite course to take advanced leadership courses. The student is responsible for ensuring that all minor requirements are met prior to graduation.

Minor Requirements (6 Courses, 18 Credits)

Course Number	Course Title	Credits
Required Core Courses (3 Courses, 9 Credits)		
MS 301	Training Management and Warfighting Functions	3
MS 302	Applied Leadership in Small Unit Operations	3
MS 401	The Army Officer	3
MS 402	Company Grade Leadership	3
Minor Electives (3 Courses, 9 Credits)		
LDR 2010	Strategic Planning for Leaders	3
LDR 2020	Leadership & Community	3
LDR 2030	Leading with a Digital Mindset	3
LDR 2040	Ethics & Leadership	3
LDR 2050	History of Leadership	3
LDR 2060	Global Strategic Leadership	3
LDR 2080	Leadership Communication	3

Organizational Development & Management

To graduate with a minor in Organizational Development & Management, students must take four (4) required courses and may choose two (2) courses from the list of electives below.

Minor Requirements (6 Courses, 18 Credits)

Course Number	Course Title	Credits
Required Core Courses (4 Courses, 12 Credits)		
ODM 1000	Foundations of Organizational Behavior	3
ODM 1100	Foundations of Strategic Management	3
ODM 2000	Essentials of Finance and Accounting	3
ODM 2010	Essentials of Marketing	3
Minor Electives (2 Courses, 6 Credits)		
ODM 2020	Ethics, Regulation and Social Responsibility	3
ODM 2030	Organizational Decision Making	3
ODM 2040	Strategic Operations and Process Mgt.	3
ODM 2050	Innovation & Creative Thinking	3
LDR 2070	Strategy Driven Talent Management	3

Credit-Bearing Certificate Programs. Certificate programs through the College of Professional Studies are designed for individuals who typically already have a bachelor's degree but wish to further develop expertise in a particular area. Students without a bachelor's degree are permitted to pursue the certificates in Information Systems and Technology and Leadership. Each certificate has specific regulations on transferability of prior coursework.

Certificate in Accountancy. The Certificate in Accountancy is designed to allow individuals who possess a non- business-related bachelor's degrees to acquire expertise in accounting. The program provides an educational opportunity for persons interested in securing careers in accounting in a diversity of environments in industry, business, and government, and the program also meets the needs of individuals who work in smaller businesses or who are self-employed and need knowledge of accounting practices to make critical business decisions. The certificate requires 36 accounting and business-related credits which the state of Pennsylvania currently mandates as the minimum requirement to sit for the Certified Public Accountant (CPA) examination.

To be eligible for this certificate, a student must possess a bachelor's degree from an institution accredited by the appropriate regional accrediting association. To complete the certificate in Accountancy, 36 credits are required, 24 of which must be in the accountancy area. Students take six (6) required accounting courses and may choose six (6) electives from the list below. Students are required to have completed all prerequisite courses necessary (indicated in the course description within this catalog) for each course in the certificate program. A maximum of 4 courses, specifically Principles of Financial Accounting, Principles of Managerial Accounting, Corporate Responsibility, and Principles of Finance are permitted for transfer. No other transfer courses are permitted. All remaining upper-level

courses in the certificate program must be completed at Villanova.

Certificate Requirements (12 Courses, 36 Credits)

Course Number	Course Title	Credits
Required Course (6 Courses, 18 Credits)		
VSF 2004	Principles of Financial Accounting	3
VSF 3006	Principles of Managerial Accounting	3
ACC 2310	Intermediate Accounting I	3
ACC 2320	Intermediate Accounting II	3
ACC 2360	Federal Income Tax	3
ACC 2430	Auditing	3
Elective Courses (6 Courses, 18 Credits)		
ACC 2340	Accounting Information Systems	3
ACC 2410	Accounting for Real Estate	3
ACC 2420	International Accounting	3
ACC 2450	Advanced Accounting	3
ACC 2470	Cost Accounting	3
ACC 2480	Advanced Taxes	3
ACC 3350	Fraud Examination	3
BL 2185	Law of Contracts & Sales	3
VSF 2007	Corp Responsibility & Regulation	3
VSF 2009	Principles of Finance	3

Certificate in Information Systems and Technology. The Certificate in Information Systems and Technology is designed to help students acquire related information systems knowledge and skills through a broad selection of coursework. Students are **not** required to have a bachelor’s degree to enroll in the certificate program; however, must have completed all prerequisite courses necessary (indicated in the course description within this catalog) for any course in the certificate program. Courses may be transferred in from other accredited universities to fulfill prerequisite requirements but will not be applied to the overall certificate credit hours. To complete the certificate in Information Systems and Technology, students must take the required and elective courses listed in the tables below.

This certificate has two unique tracks. Track A prepares students for the Software Engineering Graduate Program in the College of Liberal Arts and Sciences. This track allows students who do not have a background in computer science an opportunity to complete the necessary

prerequisites to be eligible for admission into the Software Engineering Graduate Program. Track B is more generally focused and intended for students who are seeking to attain leadership and management in business as related to information systems and technology.

Certificate Requirements – Track A (6 Courses, 20 Credits)

Course Number	Course Title	Credits
Required Courses (4 Courses, 13 Credits)		
CSC 1051	Algorithms & Data Structures I <i>Prerequisite for graduate programs</i>	4
CSC 1052	Algorithms & Data Structures I [Prerequisite: CSC 1051] <i>Prerequisite for graduate programs</i>	4
CSC 1300	Discrete Structures <i>Prerequisite for graduate programs</i>	3
CSC 2400	Computer Systems I [Prerequisites: CSC 1052 + CSC 1300 or MAT 2600] <i>Prerequisite for graduate programs</i>	3
MIS 2030 CSC 4480 (Choose one)	Database Management) [Prerequisite: VSB 2006 + VSB 2020] Principles of Database Systems [Prerequisites: CSC 1051 or ECE 1620 + CSC 1300 or MAT 2600]	3
MIS 2040 CSC 4700 (Choose one)	Systems Analysis & Design [Prerequisite: VSB 2006 + VSB 2020] Software Engineering [Prerequisite: CSC 1052 or ECE 2620]	3

Certificate Requirements – Track B (6 Courses, 18 Credits)

Course Number	Course Title	Credits
Required Core Course (4 Courses, 12 Credits)		
IS 1000	Introduction to Information Systems & Technology	3
IS 1100	Data and Information Management	3
CSC 1010	Programming for All	3
CSC 1035	Databases for Many Majors	3
Elective (2 Courses, 6 Credits)		
CPS 3000	Introduction to Project Management	3
CSC 1020	Computing and the Web	3
LDR 2030	Leading with a Digital Mindset	3
ODM 1100	Foundations of Strategic Management	3
ODM 2000	Essentials of Finance and Accounting	3

ODM 2040	Strategic Operations and Process Improvement	3
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Certificate in Leadership. The Certificate in Leadership is designed to help individuals acquire related knowledge and skills through a broad selection of coursework. It is especially useful for those students who have already completed a bachelor's degree in business or liberal arts but now wish to acquire a more formal grounding in leadership practices; however, one does not have to hold a bachelor's degree to complete the certificate. To complete this certificate, students must take two (2) required courses and choose three (3) electives.

Certificate Requirements (5 Courses, 15 Credits)

Course Number	Course Title	Credits
Required Courses (2 Courses, 6 Credits)		
LDR 2000	Foundations of Leadership	3
LDR 2010	Strategic Planning for Leaders [Prerequisite: LDR 2000]	3
Elective Courses (3 Courses, 9 Credits)		
LDR 2020	Leadership & Community [Prerequisite: LDR 2000]	3
LDR 2030	Leading with a Digital Mindset [Prerequisite: LDR 2000]	3
LDR 2040	Ethics & Leadership [Prerequisite: LDR 2000]	3
LDR 2050	History of Leadership [Prerequisite: LDR 2000]	3
LDR 2060	Global Strategic Leadership [Prerequisite: LDR 2000]	3
LDR 2070	Strategy Driven Talent Mgt [Prerequisite: LDR 2000]	3
LDR 2080	Leadership Communication [Prerequisite: LDR 2000]	3

Certificate in Pre-Health Professions Sciences. This certificate program provides a fundamental education in the sciences that can lead to entrance into schools of the health professions and to a wide array of careers and is intended for those who possess a bachelor's degree in a non-science field. To be eligible for this certificate, a student must possess a bachelor's degree from an institution accredited by the appropriate regional accrediting association. Students are strongly encouraged to check the admissions requirements for individual schools and programs relating to the health professions. Students will work in collaboration with their assigned CPS advisor and an advisor in the Health Professions Advising Program to scheduled required and elective courses.

Students can align course selections with their professional interests and the requirements of their respective graduate program. Students will plan their course of study in concert with their CPS Advisor as well as the Health Professions Advising Office in CLAS. A total of 15 credits may be transferred in at the time of admission.

Certificate Requirements (30 Credits)

Course Number	Course Title	Credits
BIO 1205	Human Anatomy and Physiology I (lab included)	4
BIO 1206	Human Anatomy and Physiology II (lab included)	4
BIO 2105	General Biology I (lab included)	4
BIO 2106	General Biology II (lab included)	4
BIO 3055	Animal Physiology	4
BIO 3105	Biostatistics & Exp Design	4
BIO 3351	Genetics	4
BIO 3455	Histology	4
BIO 3595	General Microbiology	4
CHM 1151	General Chemistry I	4
CHM 1103	General Chemistry Lab I	1
CHM 1152	General Chemistry II	4
CHM 1104	General Chemistry Lab II	1
CHM 2211	Organic Chemistry I	3
CHM 2201	Organic Chemistry Lab I	1
CHM 2212	Organic Chemistry II	3
CHM 2202	Organic Chemistry Lab II	1
CHM 4611 CHM 4621 (Choose one)	Survey of Biochemistry Biochemistry I: Structure	3
PHY 1100	General Physics I [Pre-Req: MAT 1312 or MAT 1400 or MAT 1500]	3
PHY 1101	General Physics I Lab	1
PHY 1102	General Physics II	3
PHY 1103	General Physics II Lab	1
CLA 2021	Language of Science and Medicine	3
PSY 1000	General Psychology	3
PSY 3200	Human Development	3
PSY 3700	Abnormal Psychology	3
STAT 1313	Statistics for Life Sciences	3

MAT 1500	Calculus I	4
MAT 1500	Calculus II	4
STAT 1230	Introduction to Statistics I	3
THL 4200	Ethics of Life and Death	3

Academic and Student Information

Summer Sessions. The summer program at Villanova is designed to assist students in fulfilling their academic needs through a variety of graduate and undergraduate courses offered each summer.

Summer sessions run two four-week day sessions, and one eight-week evening and online session, and follow the dates specific on the University Academic Calendar found on the website of the Office of the Provost and CPS.

Visiting Students. Visiting students from other colleges/universities are required to apply to the College of Professional Studies. Academic advisement and the transferability of a Villanova summer course to the visiting student's college/degree program is the responsibility of the student.

Current Villanova Students. Current Students register using the MyNOVA system, after obtaining their PIN from their academic advisor. Students dismissed from Villanova University may not attend Summer Sessions.

For more information on summer sessions and assistance with registration, call (610) 519-4300 or visit villanova.edu/summer-session.

Flexible Enrollment Options. The College of Professional Studies offers flexible pathways designed to help adult students achieve their academic goals while balancing life's responsibilities. Courses are delivered via in-person, online or hybrid modalities. In addition, various course lengths are offered including full semester, fast forward, and weekend.

Full Semester Courses

Courses that run the full semester are 14 weeks in length and follow the Undergraduate Academic Calendar dates and deadlines found on the Provost's website: <https://www.provost.villanova.edu>

Fast Forward Courses

Fast Forward courses are designed to help adult students accelerate their path toward graduation. These courses are restricted to CPS students only and are scheduled as two- seven-week sessions throughout the fall and spring semesters. The session's start and end dates coincide with the Villanova University Academic Calendar and are listed on the CPS website:

https://www1.villanova.edu/villanova/professionalstudies/Course_Schedules/calendar.html

Schedule and Time Sequence

Fast Forward courses* are held on weekday evenings, for a class period of 3 1/2 hours, or offered online as distance learning. On campus courses are designed with 1,470 minutes of in person class time and an additional 780 minutes of required instructional equivalent online activities and assignments for a total of 2250 minutes or 37.5 hours per course.

Fully online courses also meet for the equivalent of 2,250 minutes using a combination of live instruction time, to meet a minimum of 1 hour each week and having students engage in similar instructional equivalent activities.

Weekend Courses*:

Courses offered over a weekend meet on Friday evening for 3 hours, a full day on Saturday (8 hours) and Sunday morning (3 hours). These courses require additional pre and post meeting reading and assignments.

**Specific attendance and drop/add policies apply, please refer to the Attendance Policy and Drop, Add, Withdrawal and Refund Policies for more information.*

Variable Course Load. Students may vary their course load semester by semester, depending on their professional and personal demands. Full time status is defined as attempting 12 or more credits per semester, students attempting less than 12 credits per semester are considered part-time.

Change of course load may affect financial aid status, students should contact the Office of Financial Assistance for more information. Please see the Bursar's website for more information about credit limits and costs.

Course Modality. Courses are offered in person (on campus or another location), online (DL) or hybrid. Modality is identifiable by attribute in the Master Course [Schedule](#). Online courses may be either synchronous which require virtual live class sessions, or asynchronous which have no requirement for live class sessions.

Student Class Levels. Students at CPS are classified into the following levels based on their corresponding earned credit hours as follows:

Class Level	Credit Hours Earned
Freshmen	0 - 29
Sophomores	30 - 59
Juniors	60 - 89
Seniors	90 +

Admissions

Admissions Requirements. Students in the College of Professional Studies are normally working professionals who are seeking to complete their degree or credit-bearing certificate in a flexible manner. Our students have typically earned prior college credit and/or an associate's degree. For students without earned college credit, we require a minimum of four years post-secondary work experience, military experience, professional education, or a combination of the three before applying to our degree or credit-bearing certificate programs.

Students in the College of Professional Studies, on average, are 37 years old with 5-11 years' work experience and have generally earned at least 15 college credits.

Prospective adult students interested in applying to a degree or credit-bearing program in the College of Professional Studies will need to submit the following to be considered for admissions:

Degree Programs

- Application fee: \$50.
- Official college transcript(s) for each school attended.
Note: Unofficial transcripts can be submitted as part of the application, but official transcripts must be received by CPS upon admission and before registration
- An official high school transcript, or proof of passing the GED, is only required for students who have not earned 15 or more college credits.
- A 350-word essay, discussing your interest in the program to which you are applying, and the goals you wish to achieve as a result of attainment of a degree.
- Current resume showing 4 years of post-secondary work experience.

Credit-Bearing Certificate Programs

Certificate in Accountancy

- Application fee: \$50.
- Official transcript documenting a Baccalaureate degree from an accredited institution.

Note: Unofficial transcripts can be submitted as part of the application, but official transcripts must be received by CPS upon admission and before registration.

Certificate in Information Systems and Technology & Certificate in Leadership

- Application fee: \$50.
- Official college transcript(s) for each school attended.

Note: Unofficial transcripts can be submitted as part of the application, but official transcripts must be received by CPS upon admission and before

registration.

- An official high school transcript, or proof of passing the GED, is required for students who have not earned 15 college credits.

Pre-Health Professions Certificate

- Application fee: \$50.
- Official transcript documenting a Baccalaureate degree from an accredited institution.

Note: Unofficial transcripts can be submitted as part of the application, but official transcripts must be received by CPS upon admission and before registration.

- Statement of Purpose describing the applicants' career and educational goals, reasons for pursuing the Pre-Health Certificate, and please explain if the applicant believes their transcripts and previous academic history do not present an accurate picture of their academic ability. The statement of purpose should be around 1-2 pages.

College of Professionals Studies International Student Admissions

- Application fee: \$50.
- Transcripts: High school transcripts and official transcripts from all institutions of higher education where applicant completed coursework are required. Official English translation required by WES or NACES approved agency.
- Non-native English speakers must also submit official scores from either TOEFL or IELTS.
- Completed Certification of Finances form along with bank statement (dated no later than three months prior to the submission of your application) showing the ability to meet tuition and living expenses. If the bank statement is not in the applicant's name, then a letter of support must accompany the bank statement of the account holder stating he/she will financially support the application while he/she is attending Villanova.

The College of Professional Studies does not offer student housing. All international CPS students must secure their own housing.

International students are only admitted to the following CPS Credit Bearing Programs:

Bachelor of Interdisciplinary Studies (BIS)

Bachelor of Arts in Leadership Studies (BA)

Official Transcripts should be sent to: **Mail** – Villanova University, College of Professional Studies, 800 Lancaster Avenue, Villanova, PA 19085; **Electronic** – cps.info@villanova.edu

Individual Courses at Villanova. The College of Professional Studies welcomes students interested in taking individual courses, but not enrolling in a degree program. These students typically enroll for professional enrichment or to complete prerequisite courses for another program. The application process to enroll in individual courses is competitive and dependent upon course availability. Students must have completed at least 15 college credits and demonstrated strong academic performance.

Students who are currently enrolled in another university can apply and be considered based on individual circumstances and with an official letter from their home university. The letter must state that they are in academic and disciplinary good standing and the credits can be transferred to the home institution.

If a student is accepted to enroll in individual courses, students are only eligible to enroll in 9 credits.

During the University's Summer Sessions, anyone who has earned a high school diploma (including individuals who are enrolled in another university) may apply to enroll in a course as a visiting student. Students must submit a copy of their high school or college transcript. High school applicants must have at least a 3.0 GPA.

Admissions Policies

Admission Deferment Policy. Students who confirmed admission to CPS who now wish to defer their start date to a later semester may apply for an admission deferment.

Requests to defer an offer of admission will be reviewed on a case-by-case basis and may be granted for reasons including illness, military service, or other extenuating circumstances. Supporting documentation must be provided with the application for deferment.

An admission deferment may be granted for a maximum of one year. Deadline for application of deferment is the same date as the drop/add deadline for the current semester.

Failure to meet any of these terms may result in the revocation of admission. In such a case, an applicant will need to reapply for admission to the University by the appropriate application deadlines.

Readmission Policy. Students are expected to make adequate, timely progress towards completion of their degree or credit-bearing certificate in the

College of Professional Studies. Students who have voluntarily withdrawn from the College or have been away from the program without notifying the University for one academic calendar year may submit a petition for re-admission. In addition to submitting a petition, students will need to submit a new application to CPS. Petitions should be addressed to the Dean of the College of Professional Studies. The decision to re-admit students is made by the Dean, in consultation with the Director, Admissions and Enrollment and the Director, Academic Programs.

Students may only re-admit one time to the College of Professional Studies.

To have re-admission considered, a former student should submit the following in their petition:

1. Full name at time of previous enrollment.
2. Name of previous degree / credit-bearing certificate program and major (if applicable).
3. Dates of attendance.
4. Reasons for withdrawal or absence.
5. Timetable for completion of degree / certificate requirements including expected date of graduation, if re-admitted.
6. Official transcripts of any universities attended since you left Villanova.
7. Complete the Declaration of Major Form (only required if applicant has completed 72 or more Villanova credits)

Students who are successfully re-admitted are subject to the rules and degree requirements as specified in the Undergraduate Catalog in effect for the academic year in which they are re-enrolled. This means that students will be required to complete any new courses or other graduation requirements that are currently required. A return to study is not always granted. Prior acceptance to any Villanova program does not guarantee future acceptance to that same or another program regardless of coursework completed or GPA.

The Dean will review the petition and the Directors' recommendations and will contact the student with a final decision. All decisions made by the Dean on matters of readmission are final and without right of further appeal.

Exceptions to the conditions of the above policy will be made for service members who have not been able to attend school due to military service.

Per the Academic Standing Policy, found on the Office of the Provost's Website: "Any student who has not completed a degree within twelve years must complete a degree through CPS. If the degree or major pursued by the full-time student is not offered by CPS, then the former full-time student must choose a degree and/or major offered to part-time students."

Academic and Student Policies. Unless otherwise noted, The College of Professional Studies follows the general University academic policies and regulations listed on the Office of the Provost's [website](#). It is the responsibility of the student to know and observe all academic policies and regulations of the University and the College of Professional Studies. **Note:** such policies may change without prior notice. Check the [CPS Policies & Forms](#) website for the most up to date information.

Academic Bankruptcy. A CPS student who formerly attended Villanova University and has returned after a period of 12 years or more with a cumulative GPA below a 2.00 may be permitted to request academic bankruptcy for work completed prior to their return. Students must have completed two consecutive semesters at CPS and have met all required conditions of their CPS admission. Normally grades which earned a D or below will be considered for bankruptcy. A maximum of 30 credits can be bankrupted. All bankrupted grades will be excluded from the cumulative grade point average (though a record of the student's work will remain on the transcript). Application must be made in consultation with academic advisor and must be accompanied by written explanation of request. All repeated courses must be taken at Villanova. Once academic bankruptcy has been approved, the student may not revoke the decision and the original grades cannot be reinstated. Academic bankruptcy may be granted only one time during a student's entire academic career at the University. Advisors will educate students on this policy during their first meeting. Advisors will work up the [Academic Bankruptcy Spreadsheet](#) with the student's information. After the conclusion of their second consecutive semester, form is submitted to the Director of Academic who sends it to the Associate Director of Student Support Services for processing.

Academic Advising. Every student entering the College of Professional Studies is assigned an Academic Advisor. Advisors are available in person, via telephone and video meetings, during posted hours and/or by appointment. It is the responsibility of the student to connect with their advisor prior to each registration period and throughout their degree program to review academic goals and progress. Students must meet with their academic advisor prior to the registration period for each upcoming term. Students are not permitted to register for courses until they have met with their advisor.

Academic Standing CPS follows University Policies on Academic Standing and Probation. For entire policy see the Office of the Provost's website: <https://www1.villanova.edu/villanova/provost/resources/student/policies/standing.html>

Villanova uses three related policies to define Academic Standing: Grade Point

Average; Academic Progress and Academic Probation. The correct interpretation of all three policies is that all students who are making sufficient progress toward their degree and who are eligible or have been allowed to register and take academic course work at Villanova for the current term are considered in good academic standing.

Academic Probation: The records of students whose cumulative or semester quality-point average falls below 2.00 will be reviewed by the Academic Standing Committee of their college for appropriate action. Students in business, science or engineering whose technical course quality-point average falls below 2.00 will also come before the committee. Typically, the student will either be placed on academic probation or dismissed. While on academic probation, students are limited to a schedule of courses determined by the Academic Standing Committee of their College. A student on academic probation will normally be allowed only one semester to achieve the required quality-point average.

Academic Dismissal: A student who is not making satisfactory academic progress (minimum 2.0 GPA and eligible to register for academic course work in the current term) at CPS will be dismissed from the college. For additional information, refer to the University Academic Dismissal Policy found on the Office of the Provost's website.

<https://www1.villanova.edu/villanova/provost/resources/student/policies/dismissal.html>

Advanced Academic Credit. In addition to the provisions for advanced academic credit listed in each College's section of this Catalog, CPS students may gain credit by examination by means of the College Level Examination Program (CLEP) administered by the College Entrance Examination Board. Credit is awarded for the CLEP Subject Examinations and NOT for the General Examinations. The credit must be applicable to the student's program. CLEP credits are considered transfer credits. A list of transferable CLEP courses is available on the CPS website. A score of 60 or higher on an approved Subject Examination will be considered for credit. Incoming students who have taken Advanced Placement (AP) or International Baccalaureate Higher Level (IB) exams should contact their Academic Advisor to verify Villanova's receipt of the official scores and ensure that proper adjustments have been made to their academic record. Students should request that the College Board send AP scores directly to Villanova University (school code 2959). A maximum of 60 transfer credits, which includes, CLEP, AP and IB credits, and credits from other colleges or universities, may be accepted toward a degree program. These credits are not accepted for core curriculum courses. Students seeking to transfer ACE credits (such as Joint Military Transcripts) should discuss transferability with their Academic Advisor.

Class Attendance. Attendance and engagement during classes are vital to student success. As such, CPS retains the following policies surrounding class attendance:

- **Full Semester Courses:** CPS follows the University [Class Attendance Policy](#) for all full semester courses.
- **Fast Forward Courses:** Absences by students in Fast Forward classes are problematic due to the limited number of class sessions. If a student expects to miss more than one session, they should be discouraged from enrolling in the class. If a student misses more than one session, they should provide documentation for the extenuating circumstance resulting in their absence(s) for it to be considered “excused.” Excused absences include the list offered in the [Class Attendance Policy](#).
- **Weekend Courses:** Students are required to attend all sessions of a course offered over a weekend.
- **Drop, Add, Withdrawal, and Refund Policies**
- **Full Semester Courses:** CPS follows the University Policies and Deadlines for dropping/adding, withdrawal and refunds from full semester courses.
- **Fast Forward Courses:** Students may add or drop a Fast Forward course within the first week of the class meeting. Dropping a Fast Forward course before this deadline creates no financial penalty, per the [Tuition Refund Schedule](#) via the Bursar’s Office.

Students may receive an authorized withdrawal from a Fast Forward course without academic penalty and receive a grade of “WX” up to Week 4 (four) of the course. After that date, a student seeking authorized withdrawal without penalty must petition the Dean, who has sole authority to grant withdrawals without penalty. Students dropping or withdrawing from any course should review the Bursar’s [Website](#) for information on tuition refunds.

Declaration of Major. Students enter the College of Professional Studies as undeclared regardless of their academic standing. The intention is for students to explore different major options by taking diverse classes during their early tenure.

To ensure students are progressing towards an undergraduate degree in a timely manner, all undeclared students must officially declare a primary major no later than the registration period during the term in which they will reach 72 completed academic credits. This includes all credits i.e., Villanova, transferred from other institutions, and test credits. Once a student declares a major, they remain eligible to change their major and/or add a second. Students are encouraged to consult with their advisor regularly to develop an

individualized academic plan.

A registration hold will be placed on a student's account who does not declare a major by the required term. This hold will prevent students from all future registration activities (i.e., adding, dropping, or withdrawing) until it is cleared. To clear this registration hold, undeclared students must declare a major.

Students officially declare a major by submitting the online Change to Major/Minor Form on the [CPS Policies and Forms webpage](#). To access this form, students will need to log in with their Villanova single sign on credentials.

Declaration of Major for Returning Students. Those who are coming back to Villanova with less than 48 credits remaining must change their major prior to being admitted. Admissions will send them the [Declaration of Major Form for Former Villanova Students](#). Once the student fills it out, it gets approved by CPS advisor, then sent to Maryjo where she can submit the request to the Registrar. She will approve of the form once when it has been applied and the notification would go to CPS advisor, the student, and Admissions.

Double Major. Students may choose to double major by declaring a secondary major in another discipline within the College of Professional Studies. A student may not declare a secondary major without first declaring their primary major.

Typically, the first major that a student declares will be treated as their primary major unless they choose to double major in a BIS and BA or BS program. In this situation, the BA or BS major will become the student's primary major, and BIS will be secondary. If a student wishes to keep the BIS major as their primary major, their secondary major must be a BIS as well. Students adhere to the core curriculum for their primary major.

To complete a second major, a student must complete all credits required for that major. With the permission of the Director of Academics, students may share a limited number of credits between the primary and secondary major. Declaring a second major may mean that the student will need to complete more credits than the original degree or major requires.

Students who major in General Studies, BIS are not permitted to select a secondary major due to the interdisciplinary nature of this program. Students are welcome to select one or multiple minors.

Multiple majors, regardless of college, will appear on a student's transcript; however, a student will receive one diploma. Students who have completed all

the requirements for two or more degrees – i.e., BA and BIS, BA and BS, or BIS and BS – must choose which degree to take – unless they have completed 43 or more additional credits beyond the greater of the two program credit requirements, in which case they may receive two degrees and two diplomas.

There are some circumstances where students may pursue a secondary major in another college at Villanova. They must adhere to all guidelines of the issuing college to complete the program requirements.

Secondary majors open to all Villanova students

- [Theology](#)

Graduate Courses (Undergraduates Taking Graduate Courses).

Matriculated undergraduate students are permitted to take graduate courses according to the Provost's [Policy on Undergraduates Enrolling in Graduate Courses](#). The following criteria determines a students' eligibility:

- Senior standing (see [student class levels](#))
- Cumulative GPA of 3.2
- Submit the [Permission to Enter Graduate Courses](#) form

Students who are considering a master's degree are encouraged to take graduate level courses. Up to nine credits may be shared between a student's undergraduate and graduate degrees. Students do not have to be admitted to a combined bachelor/master's program to take graduate level courses. If a non-matriculated post-graduate student wants to take graduate level courses, they will be referred to the College offering the course they wish to take.

Request to take Course(s) at Another Institution. Once a student has matriculated in a degree program at Villanova University, credit for courses from other universities may only be transferred to Villanova under certain circumstances. Students may request to enroll in courses at another institution by submitting the form below. Students permitted to take courses at another institution are required to adhere to Villanova's policy on [transfer credits from another institution](#) and College of Professional Studies' [transfer credit policy](#).

Please note the following additional policies concerning transfer courses:

- Approval must be granted prior to enrolling in the course(s); Villanova credit will not be awarded for students who take a course(s) and retroactively seek approval.
- The deadline for submitting this form is 15 days prior to the start of the course.

- To be eligible for transfer credit from another institution a student must have a cumulative grade point average (GPA) of 2.0 or better and be in good academic standing. If GPA falls below 2.0 once grades are posted, the pre-approval will be voided.
- Grades earned in courses taken at other institutions are not factored into a student's Villanova GPA. A "T" grade will appear on the Villanova transcript and not the actual grade received.
- Courses offered at regionally accredited four-year and two-year institutions can be considered for transfer credit.
- All courses must be taken in the standard letter grade scale; Satisfactory/Unsatisfactory option is not applicable for transfer for Villanova credit.
- There may be additional restrictions on course applicability to core and major requirements depending on a student's degree and major.
- In all cases, the final 30 credits of a student's academic program must be completed at Villanova.
- Final official transcripts must be sent to Villanova College of Professional Studies at the completion of the course to officially award credits towards a student's Villanova degree.

After speaking with an Academic Advisor, students can fill out this form to request permission to take courses at an external institution on the [Policies & Forms](#) page. When the student fills out the form, it is sent to the associate director of advising who vets the courses, then sent to the director of academic programs for final approval. All parties are notified once it is approved.

Repeating Courses. Unless otherwise stated in the catalog, students are not permitted to repeat courses previously taken at Villanova if they have received a passing grade without approval from the Director of Academic Programs. If approved, the following conditions apply:

- All course attempts will be recorded on the Villanova transcript. Repeating a course does not replace the first attempt.
- All grades will appear on the Villanova transcript and factor into the GPA.
- The repeated course will only count for credit towards program requirements and graduation once.
- No course can be taken a third time; a student may only repeat a course once.

Request to Repeat a Course form on our [Policies & Forms](#) page.

Satisfactory/Unsatisfactory Grading Policy. In courses with standard grading, students may request the Satisfactory (S)/Unsatisfactory (U) grading option, subject to the guidelines indicated by the University which can be found in the Undergraduate Catalog. The University defers to individual colleges for

further guidelines on the use of a Satisfactory (S)/Unsatisfactory (U) option. CPS students are subject to the following guidelines:

- The S/U option is available only to those students whose cumulative GPA is 3.0 or better
- Students who have reached sophomore status are eligible to request S/U grading
- A total of five (5) Villanova courses can be graded on an S/U basis during a student's academic career.
- A limit of one (1) course per semester (Fall, Spring or Summer) may be taken on a S/U basis.
- Courses that fulfill major or minor requirements are not approved for S/U grading
- A maximum of two (2) courses in the Core Curriculum (BIS students only) may be graded on S/U basis
- A maximum of three (3) courses in the Free Electives area may be graded on S/U basis
- The Withdrawal (WX) policy and procedures are the same as a standard graded course
- The "S" grade is equivalent to a grade of "C" or better.
- Satisfactory/unsatisfactory grades will be shown on the transcript but will not be reflected in the quality point average.
- Requests for S/U grading by completing and submitting the required [form](https://www1.villanova.edu/villanova/enroll/registrar/forms.html) (located on the Registrar's website: <https://www1.villanova.edu/villanova/enroll/registrar/forms.html>) prior to the drop/add deadline.

Transfer Credit Policy. The College of Professional Studies accepts a maximum of 60 total transfer credits. Eligible transfer credits are considered from one or a combination of the following sources: other regionally accredited institutions, CLEP, Credit by Examination, AP, or ACE.

Transfer credits are accepted on the basis of course equivalency and must have a course grade of C or higher. Normally, once a student is matriculated at CPS, all credits must be earned at Villanova. Transfer credits have no impact on cumulative grade point average. Transferability is evaluated and determined by the College of Professional Studies in conjunction with the Office of the Registrar, as needed.

College Transfer Policy. Students enrolled in the College of Professional Studies (CPS) are not permitted to transfer into other colleges at Villanova.

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The 2021-2022 Undergraduate Course Listing

NOTE: Course listings in the print catalog include courses offered within the past five years. To check for courses being offered in a particular term go to www.novasis.villanova.edu and explore the Master Schedule Online Search for Classes

SUBJECT	COURSE_NUMBER	TITLE	CREDIT_HRS	FIRST_TERM_DESC	DESCRIPTION
AAH	1101	His West Art: Ancient-Med	3	Fall 2021	Art & architecture in Europe, the Mediterranean (esp. Greece & Rome,) & the Middle East in prehistoric, ancient, & medieval periods, with introduction to issues & themes of art history.
AAH	1102	His West Art: Renaiss - Cont	3	Fall 2021	The history of the visual arts in the West from the Early Renaissance to the present.
AAH	1103	Visual Arts in US 1607-1876	3	Fall 2020	A survey of painting, sculpture, and architecture created in the present-day United States, from the founding of Jamestown to the great Philadelphia Centennial Exhibition.
AAH	1104	Visual Arts in US 1877-Present	3	Spring 2019	A study of painting, sculpture, and architecture done in the United States since the Philadelphia Centennial exhibition from Thomas Eakins and Gross to great contemporary artists such as Andrew Wyeth, Frank Gehry, and Jeff Koons.
AAH	1903	Internship Elective	3	Fall 2021	An internship in an elective area of concentration.
AAH	2000	Ancient Art	3	Fall 2020	The artistic contributions of the ancient societies of Egypt, the Aegean, Greece and Rome, placed within appropriate cultural contexts.
AAH	2001	Medieval Art	3	Fall 2019	European & Mediterranean art & architecture from the late Roman Empire to the 14th c. with emphasis on the social, religious & political contexts of visual production.
AAH	2002	Early Renaissance Art in Italy	3	Spring 2019	Italian art & architecture from 1300-1480, investigation of the political, religious & social contexts of the visual productions of artists such as Giotto, Donatello, Masaccio, Mantegna & Botticelli.
AAH	2003	Age of Rembrandt & Bernini	3	Fall 2020	Major works of European painting, sculpture, and architecture from the seventeenth through mid-eighteenth centuries. Special emphasis on how historical events affected the production of artistic monuments.
AAH	2004	Modern Art	3	Summer 2021	An examination of the visual arts since 1900 that emphasizes their historical roots and present social significance.
AAH	2005	Modern Architecture	3	Fall 2019	Notable buildings and architects in the last hundred years: Frank Lloyd Wright, Louis Sullivan, Antoni Gaudi, LeCorbusier, Mies van der Rohe, Robert Venturi, I.M. Pei, Walter Gropius, Philip Johnson, Frank Gehry. Emphasis on the influence of modern techn
AAH	2009	Contemporary Art	3	Spring 2021	Artistic movements and artists around the world from the 1960s to the present; Pop Art, Minimalism, Neo-expressionism, Arte Povera, Graffiti Art, and Performance Art, from Warhol to Wyeth to Haring and Koons.
AAH	2012	High Renaissance Art in Italy	3	Spring 2020	Italian art & architecture from 1480 to 1550. Investigation of stylistic, political & social contexts of art. The idea of Mannerism & artists such as Leonardo, Michelangelo, Raphael & Titian.
AAH	2993	Internship	3	Fall 2016	
AAH	3001	Women in Art	3	Spring 2021	Themes and images of women in the visual arts as an expression of the needs, desires and attitudes of society; and a study of women artists from ancient times to the present, with regard to how being female may, or may not, have affected their work.
AAH	3002	Art of Philadelphia	3	Fall 2021	Philadelphia's unique contribution to American painting, sculpture, and architecture, from the early Swedish and Welsh settlers of the Delaware Valley, to Andrew Wyeth and Robert Venturi.
AAH	3003	Romantic to Post-Impress	3	Fall 2021	Nineteenth century painting and sculpture in Europe and America, focusing on Cezanne, Courbet, Delacroix, Goya, Eakins, Homer, Manet, Monet, Rodin and West.
AAH	3005	Gender Sexuality Visl Culture	3	Spring 2021	Construction of gender and sexuality as visualized through art and various forms of visual culture. Topics include the gaze, feminist art, gendered construction of fashion, queer identities and art, and bodies and censorship.
AAH	3006	History of Photography	3	Spring 2021	History of photographic styles and techniques from 1826-Present. Emphasis on the relation of photography to capitalism, colonialism, racism, feminism, and gender identities in contemporary culture.
AAH	3007	The Art of Ireland	3	Fall 2021	The visual arts in Ireland concentrating on the Golden Age from the 5th to the 9th Century: architecture of the early monastic settlements, manuscript illumination and its influence, and the cultural impact of the Irish forms of monasticism.
AAH	3009	Topics in Art History	3	Fall 2021	Selected themes or periods in the history of art examined in depth.
AAH	4010	Interpreting Art	3	Fall 2021	An introduction to the theories and criticism relevant for the study and interpretation of art and art history such as feminism, psychoanalysis, structuralism, deconstruction, post-colonialism, and postmodernism. Prerequisite: At least one prior Art Hist
AAH	5010	Senior Research Seminar	3	Spring 2020	Art History capstone writing and research seminar, which builds on AAH-4010 Interpreting Art. Students practice advanced art historical research and write culminating research project.
AAH	5515	Independent Research	3	Fall 2021	An intensive research project under individual direction. Permission of chairperson required.
ACC	2020	Special Topics	1		Special accounting topics offered in lecture/seminar format. Permission of Department Chair.
ACC	2310	Intermediate Accounting I	3	Fall 2021	Intensive study and application of GAAP for asset valuation, income measurement, and financial statement presentation for business organizations, and the processes through which these principles evolve. Each topic under GAAP compared to IFRS counterpart.

ACC	2320	Intermediate Accounting II	3	Fall 2021	Continues the intensive study and application of GAAP for asset valuation, income measurement, and financial statement presentation begun in ACC 2310. Selected accounting and consulting issues. Correction of financial statements, income taxes, pensions,
ACC	2340	Accounting Information Systems	3	Fall 2021	This course offers both a conceptual overview and hands-on experience with a variety of AIS related material. Topics covered include: Semantic modeling and event driven accounting information systems (AIS); development, documentation, control and audit
ACC	2360	Federal Income Tax	3	Fall 2021	An introduction to federal income taxation with primary emphasis on the tax implications of business transactions. Objectives of the course are to explore tax-policy issues and to develop a basic understanding of federal income tax laws, income tax planni
ACC	2410	Accounting for Real Estate	3	Fall 2020	Accounting for both private and public real estate entities, acquisitions, development, operations, dispositions, impairments and fair value implications of real estate transactions and ownership.
ACC	2420	International Accounting	3	Fall 2021	Examines a variety of international accounting issues, including international financial accounting standards; consolidation of international operations; auditing standards and procedures; managerial accounting systems for planning, control, and performan
ACC	2430	Auditing	3	Fall 2021	Auditing standards employed in verification of and reporting on financial statements, evaluation of controls, statistical sampling, substantive testing, legal liability and professional responsibilities, and professional standards of ethics. Includes wri
ACC	2435	Advanced Auditing	3	Spring 2018	Increased regulatory requirements, globalization, and advances in data analytics are driving substantial changes in the complexity and challenges facing today's auditors. Auditors must understand and respond to such changes in order to fulfill their respo
ACC	2450	Advanced Accounting	3	Fall 2021	Theories and techniques used for specialized accounting problems, with emphasis on business combinations, consolidations, multinational corporations, not-for-profit entities partnerships, and issues related to solvency and liquidation and financial fraud.
ACC	2470	Cost Accounting	3	Fall 2020	Introduction to modern cost accounting systems and the accounting information needs of managers, including: costing approaches (job-order process, standard, and absorption); cost behavior analysis; differential costs for decision-making; activity-based co
ACC	2480	Advanced Taxes	3	Spring 2021	Advanced federal income tax topics and issues pertaining to individuals, partnerships, corporations, and estates and trusts. Emphasis on tax planning and tax research.
ACC	3350	Fraud Examination	3	Fall 2021	The focus of the course is on the pervasiveness and causes of fraud, methods for investigating fraud within organizations, and what organizations can do to prevent and detect fraud. The successful completion of the course provides a basic understanding o
ACC	3430	Accounting Internship	3	Fall 2021	Employment with approved accounting firms and business organizations; varied work experience with appropriate training, instruction, and supervision. Paper required. Restricted to Accounting majors and minors with junior or senior standing, a minimum GPA
ACC	3460	Accounting Internship-Spring	6	Spring 2021	Full-time employment with approved accounting firm or other business organizations; varied work experience with appropriate training, instruction, and supervision. Does not fulfill major requirement; satisfies one free elective only. Permission of Accou
ACC	3470	Accounting Co-Op	6	Fall 2021	Full-time employment with an approved firm in the area of Accounting where experience is gained through appropriate training, instruction, and supervision. Course does not fulfill the requirements of the major. Prerequisite: Accounting major with junior
ACC	3500	Ind Study:Accounting	3	Fall 2021	
ACS	1000	Ancients	3	Fall 2021	A Humanities seminar based principally on texts and readings drawn from primary sources up to 1650. Extensive written work and seminar discussions. Required readings: Hebrew and Christian scriptures, selections from the works of Augustine, Greek and Rena
ACS	1001	Moderns	3	Fall 2021	A Humanities seminar based principally on texts and readings drawn from primary sources 1650 to the present. Extensive written work and seminar discussions. Readings from each of the following five historical eras: Early Modern, Enlightenment, Romantic,
ADV	1000	Advising: Explore & Experience	1	Fall 2021	Take control of your education by learning how to harness opportunities that will maximize personal and professional success as you begin your journey. Understand how to make educational choices, maintain health and wellness, exhibit professionalism, and
AER	1011	Foundation of US Air Force I	1	Fall 2020	The military as a profession, including: civilian control of U.S. Armed Forces, functions and organization of the U.S. Air Force, organization and operations of U.S. strategic offensive forces.
AER	1012	Leadership Lab		Fall 2020	
AER	1021	Foundation of US Air Force II	1	Spring 2021	The U.S. general purpose and defensive forces including: Mission and organization of the major U.S. Air Force Commands and separate operating agencies, major functions and conduct of joint service military operations. Air defense, detection systems, clos
AER	1022	Leadership Lab		Spring 2021	
AER	1031	Evol of USAF Air Space Power I	1	Fall 2020	Aerospace power from balloons and dirigibles through the employment of U.S. air power in World War II. The military theory of aerospace power employment.

AER	1041	Evol of USAF Air Space Powr II	1	Spring 2019	Employment of U.S. air power in the Korean Conflict, relief missions and civic action programs in the later 1960s, and the war in Southeast Asia. The military theory of aerospace force employment.
AER	2011	Air Force Leadership Studies I	3	Fall 2019	Managerial theory, concepts and techniques of decision- making, and the basic functions of management with particular emphasis on applications for Air Force officers.
AER	2021	Air Force Leadershp Studies II	3	Spring 2021	An interdisciplinary approach to leadership which includes study of human behavior and relationships, and motivation.
AER	2031	National Security Affairs I	3	Fall 2020	The Armed forces as an integral and inseparable element of society. Emphasis on the overall national security process and the factors which comprise it. The impact of a nation's military, economic psychological, and technical components on national secu
AER	2041	National Security Affairs II	3	Spring 2021	Civilian control of the military, conflict control, military professionalism, and military justice. Emphasis on the reciprocal responsibilities of civilians and the military in a democratic society.
AFR	3000	Constructs of Blackness	3	Spring 2021	Interdisciplinary examination of ideas of black identity, culture, and politics. Course covers African and African Diaspora experience in society, history, literature, health, and others in global and national contexts. Team taught
AFR	3100	Special Topics	3		Specific topics vary each semester.
AFR	3101	Special Topics	3		Specific topics vary each semester.
AFR	3102	Special Topics	3		Specific topics vary each semester.
AFR	5000	Ind. Study Africana Studies	3	Fall 2021	Permission of Program Director. Individual students with specific interest work on a tutorial basis with an appropriate professor.
ARB	1111	Basic Arabic I	6	Fall 2021	Functional use of Modern Standard Arabic for students with no prior knowledge of Arabic. Recitations, readings and oral drills.
ARB	1112	Basic Arabic II	6	Spring 2021	Functional use of Modern Standard Arabic for students with no prior knowledge of Arabic. Recitations, readings and oral drills, supplementary language laboratory work. Prerequisites: ARB 1111 or equivalent or permission of instructor.
ARB	1121	Intermediate Arabic I	5	Fall 2021	Review of grammar and vocabulary. Recitations, readings and oral drills. Supplementary language laboratory work. Prerequisites: ARB 1111 and 1112 or equivalent or permission of instructor.
ARB	1122	Intermediate Arabic II	5	Spring 2021	Review of grammar and vocabulary. Recitations, readings and oral drills. Supplementary language laboratory work. Prerequisites: ARB 1111 and 1112 and 1121 or equivalent or permission of instructor.
ARB	1131	Intensive Adv Arabic I	3	Fall 2020	Advanced communication skills including reading and discussing topics on current events. Supplementary language laboratory work. ARB 1125 or equivalent or permission of instructor.
ARB	1132	Intensive Adv Arabic II	3	Spring 2021	Advanced communication skills including reading and discussing topics on current events. Supplementary language laboratory work. ARB 1131 or equivalent or permission of instructor.
ARB	1141	Intro to Colloquial Arabic	3	Fall 2020	Training in the use of colloquial Egyptian Arabic, focusing on listening and speaking skills. Supplementary laboratory work and drills.
ARB	2142	Arab Culture Thru Film & Text	3	Spring 2019	Arab culture and civilization with emphasis on the Arab people's contribution to the arts and sciences.
ARB	2143	Arab Culinary Culture	3	Fall 2016	Examines the development and fundamental characteristics of Arab culinary culture. Presenting Arab cuisine elements absorbed from the cultures with which the early Arabs mixed when they migrated from the Arabian Peninsula and settled into the surrounding
ARB	3412	Special Topics	3	Fall 2021	Advanced study of topics of special interest in Arabic literary and/or cultural studies. May be repeated for credit if topic changes. Fulfills core requirements for Arabic minor.
ARB	5900	ARB: Independent Study	3	Fall 2021	Supervised study, activity or research. May be taken more than once. Prior approval of chair and instructor.
ASL	1111	Intro to Amer Sign Language I	3	Fall 2021	Functional use of American Sign Language for students with no prior knowledge of ASL and Deaf Culture.
ASL	1112	Intro to American Sign Lang II	3	Spring 2021	Continuation of ASL I with increase understanding and knowledge of the ASL through description, classified and facial. Each unit has student/instructor interaction and information on grammar, comprehension and Deaf Culture.
ASPD	1001	Transitioning to College	1	Fall 2017	Transition to College is a one-credit class for first-year students. Goals of this course include addressing social skills, residence hall life, classroom etiquette, executive functioning skills, and self-advocacy. This course will be especially benefici
ASPD	2000	Prof Dev for Arts & Sciences	1	Fall 2021	Discovering your professional passion, path, and purpose. Designed for students to acquire and demonstrate professional and career readiness skills, which greatly enhance student employability in the workplace.
ASPD	2001	Intro. to Professional Writing	1	Spring 2021	Learn the hallmarks of effective professional writing: How to target an audience while writing clearly, concisely, and persuasively. Gain valuable professional writing experience directly transferable to writing in internships and professional positions.
ASPD	2002	The Legal Profession	1	Spring 2021	Investigate areas of law and potential legal paths as you learn what it means to "think like a lawyer." Learn how to maneuver successfully through the application process and how to transition well to the challenges of law school.
ASPD	2003	Professional Communication	1	Fall 2021	This course provides a foundation for leadership studies and professional speaking. You will enhance your professional communication by learning various perspectives that will deepen your understanding of leadership and enable you to succeed in a diverse,

ASPD	2004	Social Networking	1	Fall 2021	Making connections and staying connected has never been easier with sites like Facebook, Twitter, and LinkedIn. Learn how to harness the power of social media for professional gain and become a savvy social networker.
ASPD	2005	Networking for Success	1	Fall 2021	Learn the importance and relevance of networking for your professional success. This course is designed for students who want to identify, understand, and develop personal strengths and relationships to explore and expand professional opportunities.
ASPD	2009	Creativity and Innovation	1	Spring 2021	Collaborate on team-based projects designed to foster an understanding of real-world business problems that require creative and innovative solutions. Open to All Undergraduate Students Weekend commitment is a requirement Class will meet for three prep se
ASPD	2011	Personal Finance	1	Fall 2021	Personal finance is an important life skill, and after graduation, you will be responsible for your own money. Explore topics such as budgeting; living on your own; saving for that dream car, house, and vacation; responsible use of credit cards; and inves
ASPD	2012	Professional Skills-Strengths	1	Spring 2021	Professional Skills and Strengths teaches students how to understand, communicate, and leverage their skills and strengths when applying for internships and jobs.
ASPD	2013	Introduction to Data Analysis	1	Spring 2021	Introduction to Data Analysis teaches students how to interpret, create, and analyze data utilizing spreadsheets and other technological tools.
ASPD	2014	Public Policy Paths	1	Spring 2021	Public Policy Paths teaches students about careers and professional opportunities available in national and state government, and in non-profit organizations.
ASPD	2015	Management Consulting	1	Spring 2021	Students will learn about the management consultancy field and how to best pursue opportunities while engaging with alumni professionals who've built careers in the industry.
ASPD	2016	The Professorial Life	1		Students will learn what the professional life of a professor is like, from teaching, research and scholarship, to administration, mentorship, service and more.
ASPD	2017	Mathematical Communities	1	Fall 2019	This course is an introduction to the study of mathematics. Creative thinking, problem solving, and collaboration are explored. Mathematics research and careers in the mathematical sciences are emphasized. Students also build community with fellow math ma
ASPD	2018	A Life Well Lived	1	Spring 2021	Discuss and practice the core concepts of a life well lived, as studied by the Greater Good Science Center at UC Berkeley, around the core concepts of generosity, gratitude, awe, positive neuroscience, and future mindedness.
ASPD	2019	Science of Happiness	1		Follow along with the Greater Good Science Center at UC Berkeley's podcasts, "The Science of Happiness," and integrate the concepts and practices for a daily routine defined by gratitude, resilience, forgiveness, and attention to the present moment.
ASPD	2020	Building a Resilience Resume	1	Spring 2021	Failure is normal and healthy - and it can be transformative Learn from the failure resumes of others, and walk away with your own failure resume and ability to articulate how you have demonstrated growth, change and resilience.
ASPD	2021	Adulting 101	1	Spring 2021	From saving for retirement and renting that first apartment to negotiating your starting salary and sorting out employer provided health benefit, Adulting 101 prepares students for life after graduation and beyond.
ASPD	2022	Prep for Careers in Fin Serv	1	Spring 2021	Learn how to successfully identify, apply for, and interview for internships and entry-level positions in the financial services industry, and build relationships with alumni who are industry experts.
ASPD	2023	Navigating Roadblocks	1	Fall 2021	In Navigating Roadblocks, students will have the opportunity to discuss and consider effective approaches to managing stress, setting realistic goals, and persisting after failure or setbacks.
ASPD	2024	Understanding Financial Rpts	1	Fall 2021	This course will emphasize the creation and analysis of the basic financial accounting statements - the income statement, balance sheet, and cash flow statement - as well as their interpretation and how they are used in making financial and investing deci
ASPD	2025	Careers in Sustainability	1	Spring 2021	Careers in Sustainability examines professional paths related to "green jobs" and the field of environmental sustainability, and how to best prepare to pursue relevant opportunities with confidence.
ASPD	2026	Intergrating Study Abroad Exp	1		Students returning from studying abroad will develop a framework in which they can reflect upon and discuss their international experiences, and foster their intercultural competencies, while integrating their experiences into their academic and career go
ASPD	2027	Understanding Fincl Rpt II	1	Fall 2021	This course is a continuation of Understanding Financial Reporting and will emphasize the creation and analysis of the basic financial accounting statements: the income statement, balance sheet, and cash flow statement, as well as their interpretation and
ASPD	2028	Diversity & Incl the Workplace	1	Fall 2021	Learn why respectful language and vocabulary are essential to approaching uncomfortable yet important conversations about diversity, equity, and inclusion in the workplace. Develop strategies for breaking down barriers, fostering greater, understanding, a
ASPD	2029	Applying to Law School	1		Understand the process of applying to law school, including selecting target schools, writing a personal statement, requesting letters of recommendation, obtaining official transcripts, navigating the Law School Admission Council's Website, and more.
ASPD	2030	Introduction to Law School	1		Review topics, cases, and statutes typically studied during the first year (1L) of law school. Develop strong law school study strategies by reading and briefing cases.

ASPD	2031	LSAT Prep	1		Develop greater understanding and confidence related to preparing for and taking the LSAT, which is the standardized Law School Admission Test. Examine and prepare for all parts of the LSAT, including Logical Reasoning, Analytical Reasoning, Reading Compr
ASPD	2032	The Intersection of Work & Pol	1		This course aims to prepare students for a job market and professional environment in which political concerns and controversies are appearing in new and sometimes problematic ways. The course is based around specific questions and problems, and addresses
ASPD	2033	Rewrite Your Story	1	Fall 2021	This course is designed for the student that is transitioning back from time off from academics and/or interested in developing academic and professional skills to improve performance. We will start with reframing past experiences as growth moments and op
ASPD	2100	Preparing for Health Careers	1	Fall 2019	Five interpersonal and four intrapersonal competencies sought by health professions schools. What they mean, why they are important in health care, and how to develop them in oneself.
ASPD	2101	The Road Less Traveled	1	Fall 2021	This course is designed to expand students' awareness of the array of health professions. Guest speakers from fields students choose less frequently will come to class and introduce their professions. Students will have the opportunity to expand their p
ASPD	2103	Charting Your Course - Science	1	Spring 2018	Exploration of professional options offered by a degree in the sciences, such as careers in pharmaceutical and vaccine development, data analytics, and more.
ASPD	2200	Applied Professional Devlp	1	Fall 2021	Students will enhance their professional development and career knowledge through this overview of important and relevant topics related to investigating career paths and applying to internships and jobs. The one-credit Independent Study offering is des
ASPD	3000	Topics in Prof. Development	3	Fall 2021	Strategies and techniques to enhance students' professional development. Students will reflect on and write about their internship and work experiences to challenge their thinking about the workplace, leadership, and efficiency on the job.
AST	1076	How Old is the Universe?	3	Fall 2021	Explores one of the most basic questions in modern astronomy. Evidence from the Earth, Moon, and meteorites will be examined, along with that from stars, white dwarfs, and the Universe itself. Includes an overview of the formation and evolution of the Un
AST	2120	Sun and Stars	3	Fall 2021	A technical study of the Sun and other stars; their internal constitutions and atmospheres, life cycles and evolutionary processes, memberships in groups, the radiations they produce, and the manner in which astronomers quantify their characteristics.
AST	2121	Solar System Astronomy	3	Spring 2021	The science of the solar system. Early ideas of the nature of the solar system; the dynamics and compositions of the planets; atmospheric evolution and maintenance. How comets and meteorites reveal the structures of the primitive solar system.
AST	2122	Understanding Our Universe	3	Fall 2021	A study of the formation and evolution of the Universe. Emphasis on the observational evidence leading to the Big Bang Theory, inflation, dark matter, and dark energy. Current model of the universe described and evidence for the "multiverse" discussed.
AST	2123	Astrodynamics:Kepler & Beyond	3	Spring 2021	Intermediate Newtonian dynamics: description of motion under forces as functions of position, time, velocity. Motion in one and three dimensions, the Kepler problem, gravitation, and the restricted three-body problem.
AST	2133	Observational Lab I	2	Fall 2020	Astronomical instruments, methods of observing, reduction of observations, and discussion of astronomical data. Observations include CCD imaging, spectroscopy, and photoelectric photometry using the observatory reflector and Schmidt telescopes. Two hours
AST	2134	Observational Lab II	2	Spring 2021	Continuation of AST 2122.
AST	3141	Galactic Astronomy	3	Fall 2020	The nature, distribution, and motions of the constituents of the Galaxy; the major star system in which our Sun is located the stars, the gas and dust, star clusters, etc.; stellar distance determination, distribution of stars and gas, stellar kinematics,
AST	3142	Intro to Astrophysics	3	Spring 2021	Theories of stellar atmospheres, line-broadening and formation, radiative transfer, theoretical spectra, and the theory of stellar interiors are covered. Fundamental stellar timescales, thermonuclear reactions, evolutionary models, stellar pulsations, nov
AST	3143	Astrobiology, Planets, & Life	3	Fall 2021	Are we alone? Does life exist elsewhere in the Universe? Focus on the origin of life on Earth and the possibility of life in the Solar System and beyond. Topics include: Planetary-Habitability, Exoplanets, Astro/Exobiology, Extremophiles, Techniques, and
AST	3148	The Princpl of Scientific Model	3	Spring 2020	Discusses the principle aspects of computational modeling in science, with stress on interdisciplinarity and synergy with big data science. Students gain hands-on experience in solving prototypical scientific problems using modern computational techniques
AST	4121	Undergrad Research I	3	Fall 2021	Student participation in departmental or independent research under faculty supervision; frequent conferences on literature search, research techniques, experimental procedures and results.
AST	4122	Undergrad Research II	3	Fall 2021	Continuation of AST 4121.
AST	5900	Independent Study	3		Supervised study, activity or research in a selected area of astronomy & astrophysics. May be repeated for credit if the topics are different. Prior approval of chair and instructor.
AST	5930	Topics in Astron & Astrophysics	3		Lecture presentation of selected topics in astronomy & astrophysics. May be repeated for credit if topics are different. Prerequisites may be imposed depending on the topics.

BA	2002	Bus Admin Internship-Global	3	Spring 2021	Employment with an approved firm with the internship taking place outside of the United States where experience is gained with appropriate training, instruction, and supervision. Prerequisites: minimum GPA; approval of chair.
BA	2500	Communication Portfolio I	0		Record/videotape 3-5 minute oral presentation for evaluation by Communication Department.
BA	4500	Communication Portfolio II	0		Record/videotape 3-5 minute oral presentation for evaluation by Communication department.
BIO	1057	Intro to Occupational Therapy	2	Fall 2021	Provide an understanding of the practice of Occupational Therapy through observation & readings in an independent study format.
BIO	1101	Biology	3	Fall 2021	General principles, cells and energy, hereditary mechanisms, survey of organisms, evolution and ecological principles. For non-biologists who do not plan a more extensive study of biology. Open to VSB majors.
BIO	1181	Microbiology and Genetics	3	Fall 2021	The structure of prokaryotic and eukaryotic cells; microbial classification; control of microbial growth, principles of disease; pathogenic mechanisms; host defenses. Eukaryotic and prokaryotic gene organization and function; analysis of patterns of inheritance.
BIO	1205	Human Anatomy & Physiology I	4	Fall 2021	Basic concepts and laboratory studies of anatomy and physiology with presentation of overall morphology and function of the integumentary, skeletal, muscular, nervous, and endocrine systems. Designed primarily for Nursing majors and students interested in allied health professions.
BIO	1206	Human Anatomy & Physiology II	4	Fall 2021	Continuation of Biology 1205. The structure and function of the cardiovascular, lymphatic, respiratory, digestive, urinary, reproductive, and immune systems. Designed primarily for Nursing majors and students interested in allied health professions.
BIO	1903	Internship Elective	3	Fall 2021	Open to BIO and BSC majors.
BIO	1906	Internship Elective	6	Fall 2021	Open to BIO and BSC majors.
BIO	1950	TOPIC: Elective in Biology	3	Spring 2020	Selected topics in biological and interdisciplinary studies. Will not count for credit for the biology major.
BIO	1955	Lec&Lab Free Elective in Bio	4		Selected topics in biological and interdisciplinary studies with lectures and accompanying lab. Will not count for biology credit for the major or minor.
BIO	2101	General Biology I Lecture	3	Fall 2020	The lecture portion of BIO 2105. An introduction to biological organization stressing the molecular and cellular aspects of living organisms. The chemistry of life, the cell, the gene, and mechanisms of evolution.
BIO	2102	General Biology I Lab	1	Fall 2021	The laboratory portion of BIO 2105; taken with BIO 2101. An introduction to biological organization stressing the molecular and cellular aspects of living organisms. The chemistry of life, the cell, the gene, and mechanisms of evolution.
BIO	2103	General Biology II Lecture	3	Spring 2021	The lecture portion of BIO 2106. The origin of life and diversity of organisms seen in five biological kingdoms. Topics include nutrient acquisition, digestion, circulation, response to stimuli, movement, reproduction, behavior, and ecology.
BIO	2105	General Biology I	4	Fall 2021	An introduction to biological organization stressing the molecular and cellular aspects of living organisms. The chemistry of life, the cell, the gene, and mechanisms of evolution.
BIO	2106	General Biology II	4	Spring 2021	The origin of life and diversity of organisms seen in five biological kingdoms. Topics include nutrient acquisition, digestion, circulation, response to stimuli, movement, reproduction, behavior, and ecology.
BIO	2993	Internship	3	Fall 2021	Open to BIO and BSC majors.
BIO	2996	Internship	6	Fall 2021	Open to BIO and BSC majors.
BIO	3015	Animal Behavior	4	Spring 2021	Lecture topics cover communication, foraging, territoriality, mating systems, parental behavior, and social organization. Laboratories include collection, statistical analysis, and interpretation of behavioral data, culminating in a small-group independent project.
BIO	3055	Animal Physiology	4	Fall 2021	The basic principles underlying how animals function and the mechanisms used to solve physiological problems.
BIO	3105	Biostatistics & Exp Design	4	Spring 2021	The conceptualization of experimental design, hypothesis testing, execution of statistical analyses, written and oral expression of statistical results, and effective graphical presentation of quantitative data.
BIO	3155	Comparative Anatomy	4	Spring 2021	Evolution of homologous structures of vertebrates including functional considerations. Laboratory includes systematic and topical dissection of representative chordates and demonstrations of living organisms' functions.
BIO	3255	Evolutionary Ecology	4	Fall 2021	Factors affecting the distribution, abundance, and interactions of organisms. Climate patterns, biomes, physiological adaptation, behavioral ecology, population dynamics, species interactions, biodiversity, and conservation ecology. Emphasis on community level.
BIO	3351	Genetics	4	Fall 2021	Transmission, molecular, evolutionary and population genetics, gene regulation and genomics. Heredity; how genetic information is stored, regulated and transferred; how genes interact and relate to phenotype. Tutorials develop problem-solving and bioinformatics.
BIO	3385	Global Change Ecology	4	Fall 2020	Roles of ecology in documenting, responding, feeding back to, and mitigating human-caused changes to Earth's chemistry, geography and climate. Laboratories include ecological techniques, such as carbon flux measurements, and independent research projects.
BIO	3455	Histology	4	Fall 2021	The microscopic study and demonstration of cells, tissues and organ systems of the mammalian body.
BIO	3485	Marine Biology	4	Fall 2021	An introduction to chemical, physical and geological oceanography; the biology and ecology of marine organisms (Plankton, seaweeds, invertebrates, fishes, sea birds, marine mammals); and the comparative ecology of marine communities and ecosystems (estuarine).

BIO	3525	Entomology	4	Fall 2021	Lecture includes anatomy, sensory systems, physiological adaptations, reproductive biology, social behavior and interactions with humans. Laboratory includes functional morphology, ecology and taxonomy of preserved and collected specimens. Complements I
BIO	3595	General Microbiology	4	Fall 2021	Bacteria, viruses, eukaryotic microbes, immune function. Microbes in air, water, soil: interactions with plants and animals. Agricultural, commercial, industrial, and medical applications. Laboratory studies in growth and analysis of selected organisms
BIO	3661	Environment and Human Health	3	Fall 2019	Presentation and discussion of scientific aspects of topics relating to the environment and human health. Specific topics covered vary, but could include biodiversity and health, ecosystem services, infectious diseases, climate change, endocrine disruptio
BIO	3950	Special Topics in Biology	3	Spring 2021	Coverage of current topics in biology. Topics will be announced on a semester-by-semester basis. Specific information available in the departmental office.
BIO	3952	Special Topics in Biology LAB	1	Fall 2021	One credit lab in Biology. Topic to be determined by term.
BIO	3955	Lec+Lab in Topics in Biology	4	Fall 2021	Coverage of current topics in biology with lectures and accompanying lab. Topics will be announced on a semester-by-semester basis. Specific information available in the departmental office.
BIO	4105	Medical Microbiology	4	Fall 2020	In-depth study of medical microbes including bacteria, viruses, fungi, parasites. Discussion of pathogenesis, disease diagnosis, vaccine design, microbe hunting. Case studies presented. Lab provides hands-on microbiology including diagnostics, horizontal
BIO	4205	Cell Biology	4	Fall 2021	The mechanisms of cell signaling, regulation of growth and division, adhesion, movement, macromolecular biosynthesis, processing and trafficking. Important experimental techniques and strategies for study of the eukaryotic cell.
BIO	4251	Endocrine Physiol/Pharmacology	3	Fall 2020	Mechanisms of endocrine control of growth, metabolism, reproduction, adaptation, and behavior. The endocrine glands.
BIO	4252	Endocrine Physiol/Pharmacology	1	Fall 2016	Laboratory experience in endocrinology, demonstrative and analytical.
BIO	4285	Developmental Biology	4	Spring 2021	Mechanisms and patterns of vertebrate embryo development from primordial germ cells to formation of organ systems. Lectures on, and laboratory work with living embryos; microscopic study of prepared embryos; and individual research projects.
BIO	4305	Evolution	4	Spring 2019	Process and pattern from micro- and macro-evolutionary perspectives. Evolutionary genetics, natural selection, speciation, macroevolutionary trends, and extinctions. Field, laboratory, and computer approaches.
BIO	4331	Biology of Cancer	3	Spring 2020	Coverage of causes, genetics, clinical aspects, and cell biology of cancer from preneoplastic state to invasive metastasis. Includes diagnosis, therapeutics, treatment, and prevention. Coursework in cell and/or molecular biology preferred.
BIO	4451	Field Ecol and Evol	2	Fall 2019	Advanced study of organisms and ecosystems of a particular region (location varies; has included Florida, Puerto Rico, Nova Scotia). General principles explored using examples from focal area: historical and ecological biogeography, habitat patterns, bio
BIO	4452	Field Ecol and Evol Lab	2	Spring 2020	Field study of organisms and ecosystems of a focal region. Trip lasting 15-20 days usually in late May to geographical area covered in BIO 4451, with focus on local habitats and conservations projects, field identification, group exercises, and independen
BIO	4505	Molecular Biology	4	Fall 2021	DNA structure, replication, recombination, mutagenesis and repair, transcription, RNA processing, translation and the genetic code, control of gene expression, eukaryotic genome structure. Molecular aspects of immunity, cancer, and AIDS. Laboratory exer
BIO	4605	Neurobiology	4	Fall 2021	The physiology of the nervous system using vertebrates and invertebrates. The function of nerve cells, synapses, sensory, motor, behavior and learning.
BIO	4950	Advanced Topics in Biology	3	Fall 2021	Coverage of current topics in biology. Topics will be announced on a semester-by-semester basis. Typically has a course at the 3000-level as a prerequisite. Specific information available in the departmental office.
BIO	4955	Lec+Lab in Adv Topics in Bio.	4	Fall 2021	Advanced topics course with integrated lab. Topics will be announced on a semester-by-semester basis. Typically has a course at the 3000-level as a prerequisite. Specific information available in the departmental office.
BIO	5100	Senior Seminar	1	Spring 2021	Special topics in modern biology, presented by student lectures and informal discussions. Topics to be announced each semester.
BIO	5300	Biology Capstone	3	Fall 2021	Special topics in biology, covered through readings from primary and secondary literature, student presentations and/or projects, and discussions. Topics to be announced each semester.
BIO	6100	Affiliation Study		Fall 2021	
BIO	6401	BS/MS Independent Study 1	1	Fall 2021	Supervised laboratory/field research
BIO	6402	BS/MS Independent Study 2	1	Spring 2021	Supervised laboratory/field research.
BIO	6403	BS/MS Independent Study 3	1	Fall 2021	Supervised laboratory/field research.
BIO	6404	BS/MS Independent Study 4	1	Spring 2021	Supervised laboratory/field research.
BIO	6509	Directed Research	2	Fall 2021	Library &/or laboratory research under student-selected Biology faculty member (can lead to thesis research.) Sem 1&2. Prerequisite: permission of faculty mentor & instructor; 3.0 QPA. Restricted to junior or senior biology & BSC majors. Does not count fo

BIO	6609	Thesis Research I	3	Fall 2021	Laboratory research with Biology faculty member selected by student (part 1 of two-semester sequence). Fall semester. Requires permission of faculty mentor & instructor and 3.0 QPA. Part 1 of two-semester sequence; continues as Thesis Research II, which c
BIO	6610	Thesis Proseminar	1	Fall 2021	Scheduled group meetings with other research students in the department, focusing on general and specific aspects of thesis research. Fall semester. Requires permission of instructor and 3.0 QPA. Continues as Thesis Research II, which culminates in a writ
BIO	6709	Thesis Research II	2	Spring 2021	Continuation of Thesis Research I or Directed Research. Laboratory research with Biology faculty member selected by student. Spring semester. Requires permission of faculty mentor & instructor and 3.0 QPA. Culminates in a written thesis. Counts typically
BIO	6965	International Studies Biology	4		Lecture/Laboratory course taken through International Studies Program.
BL	2135	Bus. Entity Law, Gov, Ethics	3	Spring 2021	The law of agency, partnerships and corporations; personal property; the Uniform Commercial Code sections dealing with secured transactions and negotiable instruments; moral and ethical dimensions; comparison with other legal systems.
BL	2149	Cont. Topics in Business Law	3	Spring 2021	Contemporary issues and topics which affect the legal environment of business.
BL	2160	International Business Law	3	Fall 2021	The nature, sources, functions and practical applications of International Law, approached from a perspective of the individual, governments, and business entities. Emphasis on the "rules" that govern doing business globally and resolving disputes.
BL	2185	Law of Contracts & Sales	3	Fall 2021	Elements for legal agreements; Uniform Commercial Code Article 2; moral and ethical dimensions; comparison with other legal systems.
BL	3350	Independent Study - BL	3	Fall 2020	Independent Study under faculty guidance in an area of student's special interest. Permission of Faculty and Department Chair.
CBN	2900	Topics in Cog & Behav Neuro	3		Topics in Cog & Behav Neuro: Neuroscience and ethics, Neuroeconomics, Drugs and behavior, etc.
CBN	4000	Cell & Behavioral Neuroscience	3	Fall 2021	Neuronal mechanisms of behavior: Molecular and cellular processes, neural plasticity, sensory encoding, optogenetics, psychopharmacology.
CBN	4100	Cognitive Neuroscience	3	Spring 2021	Theory and research on the neural and cognitive processes that support higher-level cognition, such as memory, attention, judgment & decision making, perception, language, emotion.
CBN	5000	Seminar in Neuroscience	3	Spring 2021	Seminar exploring selected contemporary issues in neuroscience with a focus on cognitive and behavioral processes. Capstone experience for advanced (senior) CBN majors.
CBN	5900	Undergraduate Research in CBN	3	Fall 2021	Supervised research project and report. Student may register for CBN 5900 more than once; however, only 3 hours of research can be applied toward the degree requirements in cognitive and behavioral neuroscience.
CBN	6001	Thesis Research I	3	Fall 2021	Library and/or Laboratory Research under CBN-affiliated faculty mentor. Requires successful application as CBN junior, permission of faculty mentor, department chairperson, and major GPA >3.0. Culminates in a literature review and research proposal. CBN 6
CBN	6002	Thesis Research II	3	Spring 2021	Continuation of Thesis Research I. Laboratory Research under CBN-affiliated faculty member mentoring student in Thesis Research I. Culminates in a written thesis.
CEE	1205	Introduction to CEE	3	Spring 2019	Introduction to Civil and Environmental Engineering for freshman. Students are exposed to environmental, geotechnical, structural and material, transportation, and water resource problems and exercises.
CEE	1601	Civil Engineering Fundamentals	4	Spring 2021	Introduction to civil engineering, development of analytical experimental, interpretive and field-based skills and procedures for civil engineering; computation and computer methods; professional engineering. Course topics include: maps, ArcGIS, plan sets
CEE	2100	Egr Mechanics I-Statics	3	Spring 2018	Vector analysis of force systems on particles and rigid bodies with particular emphasis on mathematical and physical formulation of principles underlying the solution of engineering problems; vector algebra; friction; centroids and moments of inertia.
CEE	2103	Mechanics of Solids	3	Summer 2021	Stress resultants in bodies from tension, compression, shear, flexure, torsion and temperature; stress and strain transformations; combined stresses; load deformation relationships; Euler buckling.
CEE	2105	Mechanics I:Fund. Behavior	4	Fall 2021	Forces & moments; equilibrium of particles and rigid bodies; analysis of trusses; stress & strain; axial deformations; distributed force patterns; centroids & moments of inertia; dry friction; column buckling.
CEE	2106	Mech II:Material Behavior	4	Spring 2020	Shear & moment diagrams; bending & shear stresses; beam deflections; torsion; stress & strain transformations; combined loadings; characteristics of civil engineering materials including Portland cement concrete, masonry, wood, composites, & asphalt; expe
CEE	2211	Transportation Engineering	3	Fall 2021	Introduction to transportation planning, intermodal transportation systems, roles of government agencies, alternatives analysis, environmental justice and right-of-way process, facility design (alignment, geometrics), operations (capacity, level of servic
CEE	2301	Environmental Eng. Science	4	Spring 2021	Fundamental physical/chemical/microbiological principles of environmental engineering applications including air and water quality control and soil and groundwater remediation.
CEE	2701	CE Project Development	3	Fall 2021	Fundamental topics underlying civil engineering project design and management over the life cycle of a project including engineering economics, cost estimation (including life cycle costs) project management and leadership, project scheduling, and enginee

CEE	2805	Geology for Engineers	3	Spring 2021	Development and composition of minerals, rocks and soils; geologic structure and deformation of rock masses; weathering, mass wasting, erosion, groundwater, streams, ocean currents and glaciers.
CEE	3107	Mechanics III: Fluid Behavior	4	Fall 2021	Fluid properties; kinematics of particles & flow; conservation of mass, energy and momentum; fluid resistance, boundary layer theory, flow in conduits; lift and drag; turbomachines.
CEE	3301	Unit Operations/Pro in Env Eng	4	Fall 2021	Analysis of unit operations and processes in environmental engineering including sedimentation, coagulation and flocculation, absorption, filtration, disinfection, oxygen transfer, and activated sludge.
CEE	3401	Structural Analysis	3	Fall 2020	Concepts of stability and determinacy; moment area, conjugate beam and energy principles; indeterminate analysis by method of consistent deformation, slope deflection, moment distribution, introduction to analysis software.
CEE	3402	Structural Steel Design	3	Fall 2021	Design of structural steel members using the AISC Manual; Topics include: structural loads; ASD and LRFD design methods; local buckling; design of beams for flexure, shear, and serviceability; compression members; tension members; combined loading. Include
CEE	3500	Fluid Mechanics	3	Spring 2017	Fluid properties; fluid statics, kinematics of flow; conservation of mass, energy and momentum; dynamic similarity; fluid resistance, boundary layer theory, flow in conduits; lift and drag; potential flow; compressible flow.
CEE	3511	Hydraulic Egr & Hydrology	3	Spring 2021	Pressure conduits, water and wastewater transport, pumping; open channel flow, hydraulic structures; principles of hydrology.
CEE	3601	GIS for Engineers	3	Spring 2021	Basic principles of GIS as applied in civil engineering projects, including planning and design analysis of an interdisciplinary infrastructural project. Topics include data formats, georeferencing, mapping and visualization, site assessment, spatial and
CEE	3705	Engineering Economics	3	Fall 2020	Components of economic analysis for decision making among alternative including cash flow diagrams, break-even analysis, money-time relationships and equivalent worth, present worth analysis, rates of return, cost estimation, pricing strategy, life cycle
CEE	3802	Soil Mechanics	4	Fall 2021	Properties of soil as an engineering material, stresses in soil masses, consolidation and settlement, seepage, soil stabilization, and geotechnical testing.
CEE	3901	Soil Mechanics Lab	1	Spring 2021	Soil classification; techniques for determining properties of soil and soil aggregate; case histories in geotechnical engineering. One period a week.
CEE	3902	Civil Egr Materials	2	Fall 2020	Basic properties of civil engineering materials including steel, Portland cement concrete, asphalt binder and concrete, aggregates, wood, masonry, and composites.
CEE	3903	CE Materials	3	Spring 2021	Basic properties of civil engineering materials including steel, Portland cement concrete, asphalt binder and concrete, aggregates, wood, masonry, and composites.
CEE	3910	Fluid Mechanics Laboratory	1	Fall 2020	Experiments and demonstrations illustrating principles of flow behavior including computer-aided analysis and interpretation. Co-requisite: CEE 3500 Fluid Mechanics or permission of CEE Chair.
CEE	3913	Hydraulic Egr & Hydrology Lab	1	Spring 2021	Experiments and demonstrations illustrating principles of flow in open channel flow, hydraulic structures, pressure conduits, pumping and hydrology. Laboratory includes numerical simulation and analysis of experiments.
CEE	3921	Environmental Egr Lab	1	Fall 2020	Physical, chemical, and microbiological analyses of water and wastewater; quantitative analysis of several unit operations and processes for water and wastewater treatment plant design and control; field trips to water and wastewater processing facilities
CEE	3950	Graphical Communications	1	Spring 2021	Expressing calculations and designs through graphical techniques.
CEE	4224	Trans Facilities Design	3	Fall 2018	(CEE Senior Elective) Engineering applications of transportation design process including design philosophies, environmental impact evaluations, materials design, pavement design, and design of highway, airport, rail facilities. Use of national and state
CEE	4226	Transportation System Design	3	Fall 2021	(CEE Senior Elective and/or Technical or Free Elective) Engineering applications of transportation design process including design philosophies, elements of systems capacity design, intersections, and interchange design. Use of national and state codes an
CEE	4331	Solid & Hazardous Waste	3	Fall 2021	(CEE Senior Elective) Solid waste generation, composition, collection, management and regulations; hazardous waste classification, regulation and management; air pollution control methods.
CEE	4404	Reinforced Concrete Design	3	Fall 2021	Design of reinforced concrete members using ACI 318. Topics include: structural loads, design of flexural members (rectangular beams, T-beams and slabs), shear design, serviceability, column design, and detailing. Includes an integrated laboratory compone
CEE	4521	Water Resources Egr Design	3	Fall 2021	(CEE Senior Elective) Design fundamentals of hydrology and open channel hydraulics using production-level programs. Topics include design storms, storm water design and open-channel river modeling.
CEE	4601	CEE Capstone Design 1	3	Fall 2021	Relationships among planning, design, and construction processes for civil engineering projects. Multidisciplinary team feasibility study, alternatives analysis, and development of a conceptual design in civil engineering. Seminars on professional practic
CEE	4602	Professional Practice in CEE	2	Fall 2017	Relationships among planning, design, and construction processes for civil engineering projects. Multidisciplinary team feasibility/alternative study focusing on conceptual design. Seminars on career choices, ethics, business, public policy, and leadershi

CEE	4606	CEE Capstone Design 2	3	Spring 2021	Culminating design experience in civil engineering. Written and oral reports on a design project in one or more civil engineering disciplines.
CEE	4607	Selected Topics in CEE	3	Fall 2021	Specialty class in or independent study on a current engineering topic. Section numbers below 10 are technical electives within the CEE curriculum.
CEE	4608	Project & Constr Management	3	Spring 2021	(Technical Elective) Project scheduling, estimating, specifying, cost management, personnel management, logistical support, contracts and change orders. Interaction among clients, engineers, constructional organizations and regulatory agencies. Focus on
CEE	4609	CEE Special Topics	1	Fall 2019	Specialty class in or independent study on an engineering topic. Civil Engineering with permission of chair.
CEE	4610	Intern'l. Res. Collaboration	3	Fall 2021	Research performed off campus at an international destination. Topic, program, and work plan must be pre-approved. Requires approval of Chair.
CEE	4611	Civ Engr Service Learning	1	Spring 2018	Service learning experience related to civil engineering. Mandatory weekly group meetings for preparation and reflection on service activities and their impacts. Consent of instructor required.
CEE	4612	CEE Undergraduate Research	3	Fall 2021	(Technical Elective) Individual participation in modern analytical or experimental research activities under faculty supervision; required technical report and presentation at end of semester. Consent of department chair required.
CEE	4613	CEE Service Learning Project	3	Spring 2020	Service learning design project focused on civil engineering topics. Students must identify the project and submit a proposal describing the project to the department for review prior to enrolling in the course. Requires approval of Chair.
CEE	4620	Green Construction Materials	3		Components of a sustainable engineering system, life-cycle analysis, environmental impact, LEED standards, computer models, energy performance, eco-impact of construction materials.
CEE	4702	Construction Engineering	3		Project documents and processes from procurement through project completion. Topics include: construction methods and equipment, management, planning and scheduling, safety, quality control and assurance.
CEE	4801	Foundation Design	3	Fall 2021	(CEE Senior Elective) Soil testing, site investigation, design of both shallow and deep foundations.
CGS	2000	Linguistics as a Cognitive Sci.	3	Fall 2021	Introduction to key areas of linguistic research and their contributions to cognitive science. Emphasis on morphosyntax, phonetics/phonology, multilingualism, and psycholinguistics.
CGS	4000	Bilingualism	3	Spring 2021	Examination of cognitive correlates of bilingualism and multilingualism through review of primary psycholinguistic research and hands-on linguistic experimentation. Focus on cross-language transfer, language coactivation, language mixing and immersion eff
CGS	5900	Cognitive Science Seminar	3	Spring 2021	Interdisciplinary seminar focusing on theories, methods, and applications related to the study of intelligent systems.
CGS	5910	Psychology of Language	3	Spring 2020	Processes underlying use of language, including speech perception and production, comprehension of meaning and grammar, and conversational interaction. Draws upon research from psychology, linguistics, computer science, neuroscience, and speech pathology
CGS	5950	Ind. Res. in Cognitive Science	3		Supervised research project and report in a selected area of cognitive science. May be repeated for credit; however, only three hours of research can be applied toward the requirements of the concentration or minor in cognitive science. Prerequisite: P
CGS	5990	Special Topics	3	Fall 2020	Selected topics in Cognitive Science: attention, computational modeling, linguistics, deep learning, embodiment etc.
CHE	1102	Material Balances	3	Spring 2021	Introduction to chemical engineering processes and modeling them with material balances.
CHE	2101	Thermodynamics 1	3	Fall 2021	Thermodynamics of single component systems: applications of first and second laws, steady-state energy balances, equations of state, thermodynamic properties of fluids, thermochemistry.
CHE	2102	Thermodynamics 2	3	Spring 2021	The fundamental property relation, thermodynamic properties of single and multiple pure phases, homogeneous multicomponent phases, ideal and non-ideal liquid solutions, phase equilibria, chemical reaction equilibria, problem solving techniques, applicatio
CHE	2201	Fluid Dynamics	3	Fall 2021	Introduction to the software and computational tools necessary for chemical engineers, including MathCAD, MatLAB, ASPEN, and others.
CHE	2202	Heat Transfer	3	Spring 2021	Principles of heat flow, mechanisms of conduction, convection and radiation, correlations for heat transfer coefficients, heat transfer equipment and process applications.
CHE	2232	Fluid Mechanics	3	Spring 2020	Fluid statics, fluid properties, flow of incompressible fluids in conduits, friction factors, meters, pumps, external flow, drag, flow in packed and fluidized beds.
CHE	2301	ChE Computational Methods	3	Fall 2021	Introduction to the software and computational tools necessary for chemical engineers, including MathCAD, MatLAB, ASPEN, and others.
CHE	2402	Technical Communications	3	Spring 2021	Oral and written communication skills, reporting and analyzing results of experiments and/or literature investigations, graphical reporting.
CHE	2900	Global Pharmaceutical Industry	3	Spring 2018	Fundamental drivers such as new technologies that characterize the global pharmaceutical industry. Includes attention to regulatory harmonization and global access to medicines; as well as elements such as global supply chain management and risk based qua
CHE	3201	Mass Transfer	3	Fall 2021	Fundamentals of interphase mass transfer: mechanisms, driving force and resistance to transfer, design and analysis of continuous and staged contacting processes, gas absorption and stripping, binary distillation, liquid extraction.
CHE	3301	ChE Applied Mathematics	3	Fall 2021	Application of differential equations, linear algebra and conservation laws to model complex chemical processes (including non-steady state, and multi-dimensional examples).

CHE	3401	Unit Operations Lab 1	3	Fall 2021	Application of chemical engineering principles to laboratory and pilot scale equipment. Oral and written reporting of results.
CHE	4131	Process Design I	3	Fall 2021	Application of fundamental principles of chemical engineering to design of industrial chemical processes; use of process simulators (such as AspenTech ASPEN PLUS) for process design.
CHE	4232	Chemical Process Control	3	Spring 2021	Introduction to process control concepts and applications, computer simulation of processes during transient change, real-time and Laplace domain analysis of controlled systems.
CHE	4331	Process Modeling & Analysis	3	Fall 2021	Application of rate laws and conservation equations to modeling by differential equations of physical and chemical systems.
CHE	4831	Senior Project Studio I	3	Fall 2021	Independent investigation of a chemical engineering problem, under supervision of a faculty advisor, or industry sponsor, including a written comprehensive report. (Nine hours per week of independent study).
CHE	4832	Senior Project Studio II	3	Spring 2021	Continuation of CHE 4831. May include further investigation of same problem or a different topic.
CHE	4931	ChemE Lab II	3	Fall 2021	Design and analysis of chemical engineering experiments using laboratory and pilot scale equipment. Oral and written reporting of results.
CHE	5001	Industrial Liq & Sld Waste	3	Fall 2020	Industrial waste management: nature and sources of waste streams, principles underlying chemical and physical treatment methods, case studies of treatment technology.
CHE	5002	Prin of Air Pol Control	3	Spring 2021	Causes, effects and control of air pollution, emphasizing abatement technologies: classification and sources of airborne pollutants, particulate control devices, VOC abatement technologies, NOx and SOx abatement, and meteorological effects.
CHE	5032	Equipment Design & Spec.	3	Spring 2020	Equipment design and specification based on theoretical and practical knowledge of unit operations. Analysis and design of several types of process equipment. Mandatory tours of chemical process facilities will be scheduled on Friday afternoons based on s
CHE	5062	Chemical Engineering Economics	3	Summer 2020	Methods of economic evaluation & decision making, applied to engineering problems. Cost estimation & indexing, time value of money, depreciation, comparison of alternatives.
CHE	5131	CHE Math and Num Method	3	Spring 2019	Mathematical and numerical method techniques for solving equations of importance to chemical engineering applications.
CHE	5133	Brewing Science & Tech	3	Spring 2021	The science in the suds: course covers chemistry of malt and mashing, hops chemistry, biology of fermentation, and the engineering technology of brewing beer. This course requires an understanding of organic chemistry and microbiology. Pre-requisites: CHM
CHE	5232	Industrial Catalytic Processes	3	Fall 2021	Principles and methods of chemical kinetics and reactor design applied to heterogeneous reactive systems of industrial importance: catalysis and catalytic reactors, catalyst deactivation, diffusion effects, design of heterogeneous catalytic and non-cataly
CHE	5332	Special Topics in CHE	3	Fall 2021	Selected topics in chemical engineering: recent developments, new technology, applications of other disciplines to chemical engineering problems. RESTRICTION: Must have Chair's Permission.
CHE	5530	Gene Therapy Methods & Research	3	Fall 2021	Lectures on common cloning methods and DNA sequencing/ analysis techniques, along with labs that require students to design/construct a mammalian gene expression plasmid and evaluate it in animal cells.
CHE	5532	Intro to Biotechnology	3	Fall 2021	Production of commercially useful materials by living organisms, emphasizing emerging technology: biologically important compounds, their relationships to genetics and metabolic pathways, controlled growth of microbes, separation and purification of produ
CHE	5533	Bioseparations	3	Spring 2021	Factors underlying physical and chemical separations of natural (biological) products: centrifugation and filtration, cell Breakage, precipitation, extraction, adsorption, chromatography and crystallization; process-scale equipment and operations.
CHE	5534	Biomaterials	3	Fall 2020	Materials for use in medicine and in/on the body, material bulk and surface properties, biological responses to materials, applications, manufacturing processes, cost, sterilization, packaging and regulatory issues.
CHE	5535	Bioengineering Lab Techniques	3	Spring 2020	Fundamental concepts of current biotechnology techniques; demonstration and application of laboratory methods encountered in industry or academia, including genetic engineering, bacterial/mammalian cell culture, and protein expression, purification, and c
CHE	5632	Polymer Sci and Engr	3	Fall 2019	Basic principles of polymer science: nature and structure of organic high-polymers, polymerization reactions, physical and chemical properties, mechanical testing, viscoelasticity, flow and processing applications.
CHE	5633	Nanomaterials & Surface Scienc	3	Fall 2021	Factors underlying interfacial phenomena and nano-material formation; thermodynamics of surfaces; emulsification, foaming, detergency, nucleation, wetting adhesion, surface films; particle growth, micelles, self-assembled monolayers; unique nanoscale char
CHE	5634	Intro to Material Science	3	Spring 2021	Comprehensive introduction to structure/property relationships of engineering materials; atomic & molecular structure of materials; means to control structure; mechanical behavior; electronic behavior; effects of treatment history on properties; effects o
CHE	5715	Alternative Energy	3	Fall 2021	Technical, economic, and social evaluations of alternative and sustainable energy sources focusing on liquid fuels as well as other energy sources.
CHE	5842	Safety Analysis	3	Spring 2018	Hazard identification; flammability; material properties; pressure relief; toxicity; risk analysis.
CHI	1111	Basic Chinese I	6	Fall 2021	Functional use of Chinese for students with no prior knowledge of Chinese. New pronunciation system, Pinyin, readings and oral drills. Supplementary language laboratory work.

CHI	1112	Basic Chinese II	6	Spring 2021	Continuation of CHI 1111-Basic Chinese I New pronunciation system, PINYIN, readings and oral drills. Supplementary language laboratory work. CHI 1111 or equivalent or permission of instructor.
CHI	1121	Intermediate Chinese I	5	Fall 2021	Review of Grammar and vocabulary. New pronunciation system, PINYIN, reading and oral drills. Supplementary language laboratory work. CHI 1112 or equivalent or permission of instructor.
CHI	1122	Intermediate Chinese II	5	Spring 2021	Review of grammar and vocabulary. New pronunciation system, PINYIN, readings and oral drills. Supplementary language laboratory work. CHI 1121 or equivalent or permission of instructor.
CHI	1131	Advanced Chinese I	3	Fall 2021	Advanced communication skills including reading and discussing topics on current events. Supplementary language laboratory work. CHI 1122 or equivalent or permission of instructor.
CHI	1132	Advanced Chinese II	3	Spring 2021	Advanced communication skills including reading and discussing topics on current events. Supplementary language laboratory work. CHI 1131 or equivalent or permission of instructor.
CHI	1133	Advanced Chinese III	3	Fall 2021	Advanced communication skills including reading & discussing topics on current events. Supplementary language laboratory work. CHI 1132 or equivalent or permission of instructor.
CHI	1134	Advanced Chinese IV	3	Spring 2021	Advanced communication skills including reading & discussing topics on current events. Supplementary language laboratory work. CHI 1133 or equivalent or permission of instructor.
CHI	1151	Spec. Top. in Chinese Language	3	Fall 2020	Intensive instruction in conversation, reading and writing with emphasis on the refinement of Chinese language skills.
CHI	2143	Chinese Culture	3	Summer 2021	Chinese culture and civilization from the beginning to the present. Conducted in English.
CHI	3412	Chinese Special Topics	3	Fall 2021	Advanced study of topics of special interest in Chinese literary and/or cultural studies. May be repeated for credit if topic changes. Taught in English.
CHI	3413	Chinese Calligraphy	3	Spring 2021	Two part course: Textual study: History of Chinese calligraphy emphasizing how the Chinese culture blossomed and developed; Calligraphy practice: an on-hand developing of Chinese characters including the study of character's original meaning, transformati
CHI	3414	Chinese Classical Thought	3		Students will come to understand the basic thought, ideology, and great intellects, Sun Tzu and Confucius of life philosophy, then further examine the relationship between those classics and the ideology and philosophy of modern China.
CHI	5900	CHI:Independent Study	3	Fall 2021	Supervised study, activity or research. May be taken more than once. Prior approval of chair and instructor.
CHM	1000	Profesl Development Sem	1	Fall 2021	These courses taken by all chemistry majors each semester with presentations on the chemical profession by students, faculty and visiting chemical professionals. A broad range of activities will include presentations on undergraduate research, career pla
CHM	1103	General Chemistry Lab I	1	Fall 2021	Qualitative and quantitative laboratory experiments which include: the reactions of metals with water; the collection and plotting of data; acid-base titrations; oxidation-reduction titrations; the use of the pH meter and the determination of acid-base ti
CHM	1104	General Chemistry Lab II	1	Summer 2021	Students will be required to identify all metal ions present in an unknown solution. Quantitative titrations of sodium carbonate and the total hardness of water. Synthesis of inorganic compounds and determination of the formula of a transition metal compl
CHM	1107	General Chemistry Lab: Nursing	1	Fall 2021	Qualitative and quantitative laboratory experiments which include: chemical identification testing, molecular modeling, coordination compound synthesis, reaction kinetics and equilibrium, acid-base titrations, and gas laws Coreq. CHM 1131.
CHM	1108	General Chemistry Lab II	1	Spring 2021	Chemistry of organic and biochemical compounds with an emphasis on the identification and chemical reactivities of functional groups. Students will be required to separate and identify various organic and biochemical compounds. Open to health affiliation
CHM	1131	General Chemistry I	3	Fall 2021	Fundamental laws and theories of chemistry: atomic theory, chemical bonding, chemical kinetics and chemical equilibrium, gases, liquids, solids, solutions, stoichiometry, acid-base theories, electrochemical concepts, and an introduction to nuclear chemist
CHM	1134	General Chemistry II	3	Spring 2021	Introduction to organic and biochemistry stressing the application of principles developed in CHM 1131. Open to health affiliation students.
CHM	1151	General Chemistry I	4	Fall 2021	Basic concepts of chemistry covering the following topics: stoichiometry, redox reactions; properties of gases; thermochemistry; descriptive presentation of atomic orbitals; molecular structure and bonding; chemical trends in the periodic table; propertie
CHM	1152	General Chemistry II	4	Summer 2021	Continuation of CHM 1151. Introduction to chemical kinetics and equilibrium; the chemistry of acids and bases; buffers and titrations; complex ions and solubility; factors that drive chemical reactions; electrochemistry; nuclear chemistry.
CHM	1156	General Chemistry II for Egr	4	Spring 2021	Continuation of CHM 1151. Introduction to chemical kinetics and equilibrium; the chemistry of acids and bases; buffers and titrations; complex ions and solubility; factors that drive chemical reactions; electrochemistry; introduction to organic chemistry
CHM	1301	Inorganic Chemistry Lab I	2	Fall 2021	Selected experiments to illustrate fundamental laboratory techniques and skills. Qualitative and quantitative measurements, synthesis and characterization of inorganic complexes, literature searching and computer usage. Emphasis on modern research applic

CHM	1311	Inorganic Chemistry I	3	Fall 2021	Fundamental principles in inorganic chemistry stressing relationships among structure, bonding, and reactivity. Properties of matter, periodic trends, acid/base reactions, redox reactions, and bonding in transition metal complexes.
CHM	1502	Quant Anal Lab	2	Spring 2021	Laboratory experiments to complement CHM 1512 covering the following: gravimetric analysis, acid-base titrations (weak acid; mixed acid), complexometric titration and redox reactions.
CHM	1512	Quantitative Analysis	3	Spring 2021	Chemical analysis, with emphasis upon statistical methods, acid-base properties, pH, equilibrium expressions, complexation equilibria, solubility properties, redox potentials, electrolysis, and electrochemical cells.
CHM	1611	Gen'l Chem I for BIOC Majors	4	Fall 2021	Basic concepts of chemistry covering the following topics: stoichiometry, redox reactions; properties of gases; thermochemistry; descriptive presentation of atomic orbitals; molecular structure and bonding; chemical trends in the periodic table; properties
CHM	1903	Internship Elective	3	Spring 2021	
CHM	1906	Internship Elective	6	Spring 2021	
CHM	1909	Internship Elective	9	Spring 2021	
CHM	2201	Organic Chemistry Lab I	1	Fall 2021	Practical experience in techniques used for separation, purification, and isolation of synthetic as well as naturally occurring organic compounds. Semi-micro and micro scale experiments. Crystallization, distillation, extraction, and chromatography are
CHM	2202	Organic Chemistry Lab II	1	Summer 2021	Further training in laboratory techniques used in organic chemistry, including those introduced in CHM 2201, and utilization of such techniques in representative types of organic reactions. Semi-micro and micro scale experiments.
CHM	2211	Organic Chemistry I	3	Fall 2021	Fundamental principles of organic chemistry stressing the relation of structure and reactivity. Structure and bonding; stereochemistry; acids, and bases; electrophilic addition, elimination and nucleophilic substitution.
CHM	2212	Organic Chemistry II	3	Summer 2021	Continuation of CHM 2211. Carbonyl group reactions, aromatic chemistry, spectroscopy and special topics such as heterocycles, carbohydrates and nucleosides, amino acids and proteins, lipids, radicals, rearrangements, polymers and photochemistry.
CHM	2993	Internship	3	Summer 2021	
CHM	3201	Organic Chemistry Lab I	2	Fall 2021	Provides practical experience in the principal techniques utilized for the purification, separation, identification, and synthesis of organic compounds on the micro scale. Open to Chemistry majors.
CHM	3202	Organic Chemistry Lab II	2	Spring 2021	The semi-micro techniques include distillation, recrystallization, extraction, sublimation, and chromatography. Synthesis of representative organic compounds. An introduction to research in organic chemistry, introduction to qualitative organic analysis a
CHM	3211	Organic Chemistry I	3	Fall 2021	Fundamental principles of organic chemistry stressing the relation of structure and reactivity from a physical-chemical viewpoint. Structure and bonding; stereochemistry; acids and bases; electrophilic addition reactions of alkenes, alkynes, and dienes; n
CHM	3212	Organic Chemistry II	3	Spring 2021	Addition and substitution reactions of carbonyl compounds, electrophilic and nucleophilic aromatic substitutions, radical and concerted reactions, heterocyclic compounds and polymer chemistry. Spectroscopic methods of analysis including nuclear magnetic r
CHM	3301	Inorganic Chem Lab II	2	Fall 2021	This laboratory course emphasizes preparative techniques of inorganic compounds. Instrumental methods of structure elucidation are included.
CHM	3311	Inorganic Chem II	3	Fall 2021	The second course in the sequence on principles of inorganic chemistry with emphasis on bonding, structure and reactivity. Application of these principles to problems in acid-base, coordination, organometallic, bioinorganic and materials chemistry.
CHM	3402	Physical Chem Lab II	1	Spring 2021	Experimental methods of chemical kinetics will be covered. Spectroscopic, polarimetric, and conductimetric methods will be used.
CHM	3404	Physical Chem Lab I	2	Spring 2021	Experiments on chemical kinetics and optical spectroscopic methods including fluorescence, un-visible, infrared and Raman spectroscopy as well as conductance, viscosity, and numerical analysis of data.
CHM	3405	Physical Chem Lab II	2	Fall 2021	Experiments centered on chemical thermodynamics including calorimetry and phase equilibria, emphasizing data treatment, including error analysis curve fitting, and related topics.
CHM	3412	Quantum Chemistry	3	Spring 2021	This course will present an introduction to quantum mechanics and its implications including molecular orbital theory, electronic structure, and molecular spectroscopy.
CHM	3413	Molecular Thermodynamics	3	Fall 2021	First, second, and third laws of thermodynamics; phase equilibria and chemical equilibria; gases; and electrochemistry will be covered in this course.
CHM	3416	Physical Chem for Engineers	3	Spring 2021	Chemical kinetics, electrochemistry, and the structure and properties of materials, including atomic structure, solid and liquid state chemistry, surface and colloid chemistry, and transport properties.
CHM	3417	Biophysical Chemistry	3	Fall 2021	A study of thermodynamics, kinetics, chemical equilibria, and spectroscopy as they apply to biological molecules, macromolecules, and cells.
CHM	3501	Instrumental Analysis Lab	2	Fall 2021	Laboratory techniques to obtain quantitative information about the composition of unknown samples, including potentiometric titration, spectrophotometry, chromatography, kinetic analysis, anodic stripping voltammetry, spectrofluorometry and atomic absorpti
CHM	3503	Bioanalytical Chem Lab	1	Fall 2021	Laboratory course to complement CHM. 3514; emphasis on the analysis of biological systems utilizing modern analytical techniques. Designed for the biochemistry concentration.

CHM	3511	Instrumental Analysis	3	Fall 2021	The utilization of instruments covering the following topics: analog and digital signals, absorption and emission of light by molecules and atoms, chromatography (HPLC, GC) and detection, use of enzymes and antibodies, radioactivity, and chemometrics.
CHM	3514	Bioanalytical Chemistry	3	Fall 2021	Designed for the biochemistry concentration with emphasis on theory, instrumentation and practical applications of analytical chemistry to biological materials.
CHM	4202	Org Struct Analysis Lab	2		Laboratory experiments involving separations by modern chromatographic techniques including thin layer, radial, flash, and high performance liquid chromatography. Multistep syntheses of organic compounds with experiments chosen from the chemical literature
CHM	4222	Organic Struct Analysis	3	Spring 2021	The currently most useful spectroscopic methods for the structural determination of molecular systems, including: NMR (2D and 2D), mass spectrometry, infrared and ultraviolet-visible spectroscopies.
CHM	4224	Spec Top:Medicinal Chemistry	3	Spring 2019	History and fundamentals of modern Medicinal Chemistry and drug discovery. Drug targets, drug-target relationships: (agonists/antagonists, inhibitors/activators, modulators), structure activity relationships, on-versus off-target relationships, physicoche
CHM	4229	Organic Reactions & Synthesis	3	Spring 2021	Survey of organic reactions with emphasis on modern synthetic methods and their applications to the synthesis of complex organic compounds. Enolates, carbonyl condensation reactions, functional group interconversions, electrophilic addition reactions, red
CHM	4292	Advanced Organic Chemistry	3	Fall 2021	An expanded presentation of fundamental topics in organic chemistry: structure, bonding, stereochemistry, molecular orbital theory, reactive intermediates and reaction mechanisms.
CHM	4313	Solid State & Materials Chemis	3		Emphasis on novel inorganic materials used for solid state catalysis, semi- and superconductors, ceramics, batteries and energy sources.
CHM	4315	Organometallics	3	Spring 2020	Examination of the bonding, spectroscopic properties and reactivity of a range of ligands and complexes. Reaction mechanisms and catalytic cycles will be emphasized.
CHM	4325	Introductory Polymer Chemistry	3	Spring 2019	Topics include: step- and chain- polymerizations, copolymerizations, molecular weight determination, polymer morphology, polymer testing and characterization, and current advances in polymer chemistry.
CHM	4441	Colloidal&Interfacial Science	3	Spring 2019	Basic physicochemical principles of colloids and interfaces such as adhesion, capillarity, interfacial and solution thermodynamics as well as theories of colloidal stability (electrical double layer, zeta potential, DLVO theory), and Light scattering meth
CHM	4447	Computational Chemistry	3	Fall 2019	Focus on basic theories behind popular computational models (e.g., molecular mechanics, density functional theory) and their application to chemical problems.
CHM	4512	Chemical Instrumentation	3		Topics underlying analytical instrumentation: sources, detectors, and electronics, as well as specific instrumentation applications will be discussed.
CHM	4517	Environmental Chemistry	3	Fall 2021	Apply key concepts in chemistry to global scales by examining chemical systems within Earth's lithosphere hydrosphere and atmosphere. Examine and discuss natural processes as well as anthropogenic impacts like climate change and environmental contaminatio
CHM	4601	Survey Biochemistry Lab	1	Spring 2021	An introduction to laboratory techniques in biochemistry; enzyme kinetics, column chromatography, electrophoresis, standard biochemical assays and interpretation of data.
CHM	4603	Biochem Tech. and Pract.	1	Fall 2021	A laboratory course to complement CHM 4621 with emphasis on enzyme purification, enzyme characterization, and nucleic acid analysis.
CHM	4604	Biochem Tech. and Pract II	1	Spring 2021	A continuation of the introduction of fundamental biochemistry laboratory techniques, along with the application of skills acquired in CHM 4603.
CHM	4610	Principles of Biochemistry	3	Spring 2020	A terminal, one semester biochemistry course for the physical sciences and engineers; the kinetics and thermodynamics of biochemical systems and associated molecules, including proteins, nucleic acids, and carbohydrates.
CHM	4611	Survey of Biochemistry	3	Fall 2021	A terminal, one semester survey of biochemistry; carbohydrates, lipids, proteins, nucleic acids, enzymes, vitamins & hormones; consideration of their utilization & metabolism in living systems.
CHM	4621	Biochemistry I: Structure	3	Fall 2021	An in depth study of the structure and function of the structure and function of proteins, enzymes, carbohydrates, nucleic acids and lipids.
CHM	4622	Biochemistry II:Metabolism	3	Spring 2021	A study of the metabolism of biomolecules, including carbohydrates, lipids, amino acids and nucleotides, including the integration, regulation and control of intermediary metabolism. Emphasized are the hormonal regulation of pathways and metabolic diseases
CHM	4623	Biochemistry III	3	Spring 2021	Integration of metabolism in organisms, membrane receptors expression of genes, gene manipulation, translation, transcription.
CHM	4652	Biochemical Basis of Disease	3	Fall 2020	A study of the relationship between protein structure and disease, enzymes as therapeutic targets, peptide hormones and obesity, and glucose metabolism and cancer.
CHM	4661	Proteomics	3	Spring 2020	Principles, techniques and applications for the large-scale study of proteins, particularly in humans. Mass spectrometry will be covered in detail, and alternative methods and approaches will also be covered.
CHM	4664	Signal Transduction	3	Fall 2018	Overview of signal transduction and the biochemistry of receptors and other cell sensors, with an emphasis on oxygen, reactive oxygen species, inflammation, and disease. Current literature will be used, in addition to the textbook.
CHM	4665	Enzymes	3	Fall 2019	Structural and mechanistic aspects of enzymes. Topics include chemical catalysis, steady state and pre-steady state kinetics, mechanisms, and biological relevance of specific enzyme systems.

CHM	4710	Safety Culture in the Sci Com	3	Fall 2020	Introduction to the principles and practices of laboratory safety; understanding, recognizing, and communicating laboratory chemical, physical and biological hazards; risk assessment and management of hazards; laboratory accident prevention and safe use o
CHM	4800	Research		Fall 2021	Student participation in independent research under faculty supervision, frequent conferences with advisor on literature search, theoretical and experimental research.
CHM	4801	Research I	3	Fall 2021	Student participation in independent research under faculty supervision, frequent conferences with advisor on literature search, theoretical and experimental research.
CHM	4802	Research II	3	Fall 2021	Continuation of CHM 4801.
CHM	4803	Research III	3	Fall 2021	Continuation of CHM 4802.
CHM	4851	Thesis Research I	3	Fall 2021	Directed research with a Chemistry or Biochemistry faculty mentor that culminates in a written thesis and seminar presentation. Part I of a two-semester sequence with CHM4852. Permission of participating faculty member required. A written interim report i
CHM	4852	Thesis Research II	3	Fall 2021	Continuation of CHM4851 - Thesis Research I. Directed research with a Chemistry or Biochemistry faculty mentor that culminates in a written thesis and seminar presentation. Permission of participating faculty member required.
CLA	1250	Enemies of Rome	3	Summer 2021	Examination of the growth of the Roman Empire throughout the Mediterranean world, with an emphasis on issues of imperialism and cultural identity.
CLA	1975	Literature and Classics	3	Summer 2021	Survey of ancient and modern classical literature, varying in topic and theme, guiding students in written and oral analysis of themes in texts of the varying genres of epic, tragedy, comedy, novel, short story, film, et al., fulfilling core literature re
CLA	2021	Language of Science & Medicine	3	Summer 2021	Language of Science and Medicine Greek and Latin prefixes, roots, and suffixes in modern vocabulary; vocabulary building, with emphasis on technical terminology in scientific and medical usage. Knowledge of the languages is not required.
CLA	2032	Classical Mythology	3	Fall 2021	The myths, legends and folklore of the Greeks and Romans as they developed in their life, thought and literature; their influence on the Renaissance and modern times.
CLA	2051	Cities of Ancient Greece	3	Fall 2017	Classical archaeology and architecture of Greece. Selected sites in the Greek world with emphasis on their architectural, artistic and history significance.
CLA	2052	Rome: The Ancient City	3	Fall 2019	Classical archaeology and architecture of Italy. Selected sites in the Roman world with emphasis on their architectural, artistic and historical significance.
CLA	3001	Independent Study	3	Spring 2017	Reading of selected material in Latin or Greek or in classical literature in translation under the direction of a member of the staff.
CLA	3040	Studies in the Classics	3	Summer 2021	Selected themes of special interest. Topics vary according to interests of students and instructor: e.g. Women in the Classical World, Slavery in the Ancient World, Classical Rhetoric, etc.
CLA	3052	Roman Law	3		The origins, nature, and history of Roman Law during the Republic and Empire; evolution of the court system; civil and criminal codes; judicial procedure; social, business and economic institutions and the law; government and administration of the empire.
CLA	5900	CLA: Independent Study	3	Spring 2019	Supervised study, activity, or research. May be taken more than once. Prior approval of chair and instructor.
CLA	6001	Senior Classics Capstone	3	Fall 2021	A reading, research, and conference course on selected topics of classical culture and history; introduction to research in classical studies.
COM	1000	Surv of Communication Studies	3	Fall 2021	Process of communication; range of perspectives from which communication can be studied (from classical rhetoric to contemporary theory); the functions communication serves; and the forms of communication such as interpersonal, small group, organizational
COM	1100	Public Speaking	3	Fall 2021	Principles of communication related to speech composition and delivery; finding, analyzing, organizing and presenting material in ways appropriate to and effective with diverse audiences.
COM	1101	Business & Prof Communication	3	Fall 2021	Communication strategies and skills for a variety of business professional settings. Combines public speaking and small group organizational communication, featuring individual and group presentations. Not intended for Communication Department majors.
COM	1102	COM Foundations for Engrs	3	Fall 2021	Technical & professional communication: Oral & visual presentations, including technical reports; formulation/evaluation of data-driven arguments; group communication & listening skills. This course is only for students enrolled in Mechanical Engineering.
COM	1300	Film Analysis	3	Fall 2021	Methods and perspectives used to analyze visual media drawing on contemporary and historically important films. Historical, theoretical, and aesthetic approaches to film analysis, as well as the social, political and economic forces that influence film co
COM	1903	Communication Internship	3	Fall 2021	Supervised work/study program in radio, television, advertising, publicity or public relations.
COM	1906	Communication Internship	6	Fall 2021	Supervised work/study program in radio, television, advertising, publicity or public relations.
COM	1909	Communication Internship	9	Fall 2021	Supervised work/study program in radio, television, advertising, publicity or public relations.
COM	2200	Theories of Rhetoric	3	Fall 2021	Rhetoric as the process of symbolic creation and recreation of community identity. Theory and history of rhetoric applications to the study of politics, popular culture, speeches, media images, artistic works, advertising, and legal issues.

COM	2240	Theories of Perform Studies	3	Fall 2021	Exploration of theory surrounding the embodied and aesthetic elements of solo and group performance. Evaluates key approaches to performing literature, performance art, performance for social change, oral traditions, performance ethnography, and performa
COM	2280	Theories of Persuasion	3	Spring 2021	Presents the theoretical processes by which communication influences the attitudes, beliefs, and behaviors of message recipients. Both rhetorical and social scientific approaches to persuasion are examined. Application is made to the areas of advertising
COM	2300	Theories of Mass Communication	3	Fall 2021	Traces the evolution and structure of core theoretical approaches to understanding mass communication phenomena. Both behavioral and critical approaches and their related research traditions are explored.
COM	2340	Theories of Visual Com & Cultu	3	Fall 2021	Introduction to the major theoretical and methodological approaches to the study of images as communicative phenomena. Explores the philosophical and strategic implications of these approaches and applies them both to the analysis and production of visua
COM	2400	Theories of Interpersonal Com	3	Fall 2021	Survey of concepts and theories in interpersonal communication. Focuses on dyadic interaction and relationships as created, maintained, and modified through verbal and nonverbal behavior.
COM	2440	Theories of Organizational Com	3	Fall 2021	Exploration of the relationship between organizational and communication theories. Addresses issues of leadership, structure, culture, decision-making, communication channels, conflict, change, motivation, performance, diversity management, and external
COM	2993	Communication Internship	3	Fall 2021	Supervised work/study program in radio, television, advertising, publicity or public relations.
COM	2996	Communication Internship	6	Fall 2021	More intensive, in depth work/study/program in radio, television, advertising, publicity or public relations.
COM	3201	Rhetoric & Social Justice	3	Spring 2021	Examination of public discourse surrounding issues in social justice and human rights. Through traditional and contemporary rhetorical theory, rhetorical strategies are traced through contemporary movements.
COM	3202	Rhetoric, Identity & Conflict	3	Spring 2019	Focused reading of contemporary rhetorical theorists. Examines the cultural use of symbols for the generation of community and/or the promotion of social conflict; rhetoric as performed through ritual acts; and correct and incorrect enactment resulting in
COM	3203	Communication Law & Policy	3	Spring 2021	Constitutional, statutory, and case law as well as other public policies affecting communication professions. Surveys a wide-range of issues related to the First Amendment, access, broadcasting, commercial speech, copyright, defamation, obscenity, politic
COM	3204	Rhetoric and Democracy	3	Summer 2019	An upper-level course in which students study important rhetorical artifacts and theoretical perspectives to come to understand important ways that rhetoric has served and sometimes disserved democracy. The specific focus of the course will change accordi
COM	3207	African American Rhetoric	3	Fall 2020	The symbolic construction of African American identity in the United States through an analysis of speeches, films, television and other media. (Pre-requisites will be waived for Africana Studies concentrators or minors).
COM	3208	Rhetoric and Myth	3	Summer 2019	The relationship among rhetoric, myth, and culture with attention paid to the forces that shape mythic consciousness in culture(s). The focus of the course will vary according to instructor and semester the course is taught. (Pre-requisites will be waiv
COM	3209	Rhetorics of Race	3		Explores the rhetorical constructions, through language, visual, and material artifacts, of racialized identities and publics. Focus on rhetorical theories that explore and challenge these constructions.
COM	3240	Performance for Social Change	3	Fall 2019	Performance as a powerful medium of art and art as a powerful tool for social change. Studying established performance artists and creating original performance pieces, students address social issues through various modes of performance.
COM	3241	Performance of Literature	3	Spring 2020	Solo and group performance of poetry, prose, and drama. Focus on rhetorical power of performed literature. Combines elements of theatre, literature and communication.
COM	3246	Performance of Greek Lit	3	Summer 2017	Students analyze and perform both ancient and contemporary Greek literary texts; the performances, both solo and group are at Greek archaeological sites based on Greek oral traditions, poetry and drama, such as from Homer, Sappho, Antigone and Medea. THI
COM	3247	Storytelling	3	Fall 2020	Focus on story craft, form and practice. May include sound stories, image stories, performance, personal narrative, oral history, nonfiction. Attention on how to use stories for personal and social change.
COM	3248	Performance Ethnography	3	Fall 2021	Explores ethnographic and autoethnographic performance as an artistic tool to make discoveries about our world. Uses methods such as interviewing, participant observation fieldwork, and self-reflection to create original performance that challenge ideas o
COM	3290	Spec Top in Rhetoric & Perf	3	Fall 2021	Topic or problem in the Rhetoric & Performance area of communication selected by the instructor.
COM	3301	Intro to Film & Video Prod	3	Fall 2021	In-studio workshop that deals with basic television production techniques, including producing and directing short interview programs, news, demonstrations and short dramatic pieces. Discussion of current problems in the management and operation of a tel
COM	3302	Advanced Film & Video Prod	3	Spring 2021	Visual aspects of location single camera video productions, audio acquisition, lighting, post production support, video editing and digital effects and finished distribution. Each student will work as producer, director, cameraman, editor and writer. Hel

COM	3303	Screenwriting	3	Fall 2021	Development of narrative strategies through improvisation and techniques of mediated visualization using video.
COM	3304	Documentary Theory & Practice	3	Spring 2021	A study of the documentary as art, propaganda, social document, and instrument for social change. After a review of theory and work in documentary, students develop their own short works. For COM majors who have taken COM 3600, this course counts as a Fr
COM	3305	Radio Broadcasting	3	Spring 2021	The history and principles of commercial radio broadcasting: programming, research, sales, promotions, broadcast engineering and federal regulations. Hands-on-audio production experience with broadcast equipment focusing on the art of audio production an
COM	3306	Audio Production	3	Fall 2019	Hands-on studio course serves as introduction to the history, fundamentals and methods of audio production used in radio, television and recording studios. Students learn, identify and operate different aspects of audio production hardware such as microp
COM	3308	Digital Image Production	3	Fall 2021	This hands-on workshop introduces to the fundamentals of using digital images to communicate specific information. Students produce still and moving images for use in public relations, advertising, photojournalism, and electronic or web-based publication.
COM	3321	Interactive Media Design	3	Fall 2021	Study of the principles of creating effective communication for the World Wide Web. Explores basic web design techniques with emphasis on designing and integrating diverse media elements. Focus on the creation and manipulation of text, graphics, audio and
COM	3340	Film History	3	Fall 2020	Evolution of film as an art form; includes the impact of technology.
COM	3341	Gender and Film	3	Fall 2020	This course attends to the role of cinematic images in the cultural production of gender in contemporary societies. Students analyze images of gender in a variety of films, as well as the work of film makers who have been marginalized because of gender.
COM	3342	International Cinema	3	Spring 2021	Study of the film of or about a particular country with emphasis on political, social, cultural and artistic issues.
COM	3343	Contemporary Cinema	3	Fall 2021	Seminar course in which various strategies are applied to the analysis of contemporary films.
COM	3351	Media & Society	3	Spring 2021	Structure and content of the major media industries in America (radio, television, film, newspapers, magazines, recordings, and books), and how each interacts with individuals, groups, and institutions. Students analyze and critique media systems and con
COM	3352	Media & Technology	3	Fall 2021	Surveys the development of communication technologies from the printing press through the internet and beyond. Technological development will be used as a way to explore critical issues about economic development, the nature of meaning, technological det
COM	3353	Media & Politics	3	Fall 2020	Examination of political communication research, theory and history. A particular focus on the role of media, such as advertising and news reporting on political campaigns and policymaking.
COM	3354	Media Criticism	3	Fall 2021	Analysis of contemporary film, television, music, print media and electronic media from a cultural studies perspective.
COM	3356	Media Audiences	3	Summer 2021	Introduction to the study, measurement and analysis of media audiences, merging theoretical approaches with applied methods for understanding user behavior.
COM	3360	Introduction to Journalism	3	Fall 2021	News is an integral part of our lives. This course aims to provide a critical understanding of the role of journalism in modern society, combining theoretical perspectives on the making of news with insights from the journalists, broadcasters and editors
COM	3363	Broadcast Journalism	3	Fall 2021	Styles and techniques of broadcast journalism performance, including studio and location reporting and interviewing. Historical and contemporary trends in broadcast journalism explored.
COM	3365	Sports Journalism	3	Spring 2021	Evolution and current trends in sports journalism, emerging platforms and technologies, reporting with social media, developing source relationships, competing with your sources, working with media relations, developing written and oral reporting skills,
COM	3366	Multimedia Journalism	3	Fall 2020	Students learn to write across media platforms, create integrated news packages, and maintain strong journalistic principles, techniques and ethics.
COM	3367	Journalism Topics	3	Fall 2021	Rotating topics in journalism. Each offering will give students in-depth exposure to a particular area of journalism, taught by a foremost expert in that area.
COM	3390	Spec Top in Media & Film	3	Fall 2021	Topic or problem in the Media & Film area of communication selected by the instructor.
COM	3401	Relational COM Studies	3	Spring 2021	Explores everyday communication between people across many contexts. Critical examination of the personal, social, and cultural dimensions of human relationships. Experiential activities augment lectures/discussions.
COM	3402	Family Communication	3	Fall 2021	Explores the relationships that have the most consequences for us. Examines ways to rework relational dilemmas, collisions through dialogue, and generate effective communicative strategies.
COM	3403	Intercultural Communication	3	Fall 2020	The impact on culture of communication styles, and practices. The role of communication in personal and professional intercultural relationships.
COM	3404	Communication & Conflict	3	Spring 2019	Communicative elements of conflict that arise out of personal and cultural differences in a variety of interpersonal interactions and relationships.
COM	3406	Gender & Communication	3	Summer 2021	Communication of women and men against the backdrop of society and feminism in such communicative contexts as families, schools, friendships and relationships, organizations, media, and technology. (Pre-requisites will be waived for Gender & Women's Studi

COM	3408	Facilitation & Dialogue	3		Understanding and managing group dynamics occurring within diverse groups; interpersonal skills and techniques necessary for effective facilitation; conflict resolution and empathy in facilitative leadership; moving groups from discussion to dialogue; lin
COM	3441	Negotiation & Dialogue	3	Spring 2020	Examination of the practical, theoretical, and critical analysis of a variety of approaches to negotiation and resolving conflicts. Verbal forms of negotiation, mediation, and dialogue are developed as key components in the maintenance of any healthy org
COM	3442	Team Based Communication	3	Spring 2021	Theory and practice of communication for idea generation and problem-solving in groups, teams, and in other multiple contexts.
COM	3443	Work Life Negotiation	3	Fall 2021	Explores the increasingly blurred intersections of "public" work and "private" lives, focusing on how we navigate organizational, family, community and individual roles and responsibilities. Considers organizational policies, family practices, and larger s
COM	3444	Interviewing	3	Fall 2019	Theory and practice of methods in selected interview settings: informational, employment, and persuasive. Emphasis on communication between two persons, questioning techniques, and the logical and cultural bases of organizational persuasion.
COM	3445	COM Consulting in Organization	3	Fall 2018	Course explores theory and practice of communication consulting through a variety of case studies in the field of organizational/corporate communication. Students will be expected to work as part of a consulting team for part of the semester.
COM	3446	Space, Time & Tech in Organiz.	3		Considers individuals' experiences of organizational spaces, time, and technologies across diverse social, cultural, and historical contexts. Examines how workplace designs (Facebook's new Menlo Park building), pace of life (shrinking vacation time), and
COM	3448	Multicultural Ldrshp & Dialog	3	Spring 2021	Introduces scholarship addressing injustice and misunderstanding in America. Students will develop a dialogic perspective and a set of skills as one means of transforming themselves and their community. Must also participate in a one-credit COM 5300 topic
COM	3449	Applied Topics in Organization	3		Examines current events, social issues, and relevant topics through an organizational communication lens. Exploring a particular topic or theme, students employ organizational communication theories and approaches to consider how a chosen issue is organiz
COM	3460	Public Relations	3	Fall 2021	Provides a foundation for students interested in the field of public relations. It chronicles the development of the profession from its earliest beginnings to its role in modern management. Also attempts to bridge the gap that exists between theory and
COM	3461	Advertising	3	Fall 2021	Strategies and techniques used in contemporary American advertising: consumer behavior, market research and analysis, message development for print and broadcast, and media selection.
COM	3462	Public Relations Writing	3	Fall 2021	Offers students the foundation for producing a variety of written public relations materials. Structure includes an overview of the journalistic style of writing along with extensive practice in writing fundamentals. Following the work on enhancing writ
COM	3475	Com Challenge in Organizations	3		The purpose of the course is to make students aware of the psychology of communication and to assist them in becoming more discerning, discriminating recipients of the torrent of 24/7 bytes and bits of data. The course examines the dynamics of communicati
COM	3477	Creativity, Innov., & Entrep.	3		The course focuses on the similarities and dissimilarities among three related skills and competencies: creativity, innovation and entrepreneurship and the ways in which each can be applied to produce new or improved products and services. Topics are exam
COM	3490	Spec Top in Interpersonal Org	3	Fall 2021	Topic or problem in the interpersonal/Organizational area of communication selected by the instructor.
COM	3600	Social Justice Documentary	6	Fall 2021	Students will work together to create a documentary film that examines a social justice issue. This class requires substantial time commitments from all the students. Permission of instructor and at least three credits of prior courses in film or social j
COM	4001	Qualitative Research in COM	3	Fall 2021	Review of basis principles of critical inquiry in the interpretive paradigm. Reading and designing qualitative research in communication through gathering and critically analyzing literature in the field and proposing an original study. Methods include
COM	4002	Quantitative Research in COM	3	Fall 2021	Review of basic principles of scientific inquiry in the empirical paradigm. Reading and designing quantitative research in communication through gathering and critically analyzing literature in the field and proposing an original study. Methods include
COM	5050	Senior Project	3	Fall 2021	Design, implementation, and presentation of a group research project in which students apply the knowledge and skills learned through the Communication program of study to the investigation of rhetorical or communication phenomena.
COM	5100	Directed Study	3	Fall 2021	Supervised project culminating in term paper.
COM	5200	Topics	1	Fall 2021	Intensive workshops in selected areas of professional development or communication research.
COM	5300	Topics in Intergroup Dialogue	1	Fall 2021	Using self-reflection, identity exploration, and dialogue, learn how everyday communicative interactions can lead to cross-cultural mistrust and misunderstanding. Students also learn how social structures and institutions, e.g., schools, neighborhoods, me

COM	5464	Public Relations Campaigns	3	Fall 2021	Course explores a variety of case studies in the field of public relations including examples in media relations, crisis communication and planning. Following the review of cases, student groups will be created and will spend the remainder of the semester
COM	5600	Special Topics in Production	1	Fall 2021	One-Credit Workshops in areas of media and multimedia production. Course may be repeated six times
COU	2000	Introduction to Counseling	3	Fall 2021	Designed to introduce students to the Counseling profession and to acquaint them with the history, structure, practices, standards, values and ethics of the counselor.
COU	2500	Counseling for Women	3	Spring 2021	Special needs and considerations for counseling with Women addressed, including: violence against women, women living in poverty, health concerns, infertility, motherhood, development and aging, racial-ethnic differences, inhibited anger, envy, success or
COU	3000	Counseling Theory & Skills	3	Spring 2020	Course will cover theories and research regarding effective helping skills. Students will practice helping skills with each other and will conduct research projects evaluating their helping skills. The course is divided into a didactic and experimental c
COU	3100	Group Counseling	3	Spring 2021	An examination of group development theories, leadership, ethical and professional issues in groups. Students will apply learned group leadership skills within the classroom setting.
COU	3400	Culturally Competent Counseling	3	Fall 2021	Course explores historical and contemporary issues related to providing culturally congruent/competent human services with myriad populations. The impact of socio-identities (e.g., race, ethnicity, gender, religion, socioeconomic status, sexual orientatio
COU	3500	Devlp Perspective to Diagnosis	3	Fall 2021	Not your average abnormal psychology class. Application of diagnostic systems of mental illness to counseling practice. Experiential and didactic learning methods elucidate the etiology and treatment of mental illness. Great course if planning to pursue
COU	3600	Motivational Counseling Skills	3	Spring 2021	Provides a comprehensive overview of the theory and techniques associated with Motivational Interviewing. Motivational Interviewing is a person-centered style of counseling for eliciting and strengthening a person's own motivation for and commitment to ch
COU	3700	Family & Couples Counseling	3	Spring 2021	Examines the principles of general systems theory as it applies to working with multi-person client systems in therapy.
CPS	1001	Collge&Prof Success Strategies	1	Fall 2021	This course is designed for first-year students within the College of Professional Studies and will lay the groundwork for your success at Villanova and thereafter. In this course you will gain knowledge about Villanova, acclimate to the academic world, a
CPS	1002	Tech Competency	2	Fall 2021	This course is designed for first-year students within the College of Professional Studies and will provide a framework for readiness and success to adopt, adapt, and apply technology for success at Villanova and thereafter. In this course, you will gain
CPS	1200	New Managers Bootcamp	1	Spring 2021	Through this highly interactive bootcamp students will develop and strengthen their management skills, strategic perspective and gain tools to become an effective leader in their organization. Additionally it will afford participants a learning environmen
CPS	3000	Introduction to Project Mgmt	3	Summer 2021	This course will give a true introduction to the practice of project management and how to efficiently and effectively plan, oversee and execute projects in the workplace.
CPS	3400	CPS Internship	3	Fall 2021	Approved semester internship project involving practical application of previously learned knowledge to a business enterprise, government and/or non-profit organization; supervision by both faculty member and corporate/non-profit executive. Permission of
CRM	1001	Introduction to Criminology	3	Fall 2021	The nature and extent of crime; the factors related to criminal behavior; theories of the treatment and control of offenders; crime prevention programs.
CRM	3001	Justice and Society	3	Fall 2021	This course presents an overview of the criminal justice system. It focuses on the nature, operation and critical issues of law enforcement, the courts and corrections.
CRM	3100	Juvenile Delinquency	3	Fall 2020	Meaning and scope of delinquency; delinquency theories; role of social institutions and social agencies; prevention, control, and treatment programs.
CRM	3200	Police & Society	3	Fall 2020	Police are the gatekeepers of the criminal justice system - their decisions and actions can have enormous consequences for people's lives. But these decisions are not made mechanically by a simple application of criminal statutes. Rather police are empowe
CRM	3300	Criminal Courts	3	Spring 2021	This is a comprehensive introduction to the U.S. criminal court system. It provides an overview of the stages of the criminal process. It examines critical issues surrounding each stage and the roles of the prosecutor, defense attorney and judge.
CRM	3330	Sociology of Law	3	Fall 2021	The meaning, origin and impact of law viewed from several sociological perspectives; the law in action and the social context of legal professions.
CRM	3350	The Supreme Court	3	Fall 2021	This course examines the factors which influence the decision to charge a person with a crime, public policy considerations relating to restraints on law enforcement and the property and wisdom of some established rules of law. Supreme Court decisions aff
CRM	3400	Punishment and Society	3	Fall 2021	Survey of the historical and contemporary treatment of convicted offenders; analysis of the prison social system; analysis of the theory, practice and function of correctional programs.

CRM	3500	Capital Punishment	3		This course will examine the historical, ethical and moral implications of the death penalty. This course will discuss the imposition and effectiveness of the penalty. The international perspective will also be addressed.
CRM	3700	White Collar Crime	3	Spring 2019	White collar crimes are committed by professionals for the benefit of individuals or organizations. This course examines the nature and magnitude (cost in dollars and lives) of white collar crime. Sociological theories explaining the commission of "crime
CRM	3800	Intro to Victimology	3		This is a study of the victims of crime. Topics include the victim-offender relationship, victim vulnerability and victim culpability. A typological study of the characteristics of crime, its victims and offenders will be presented. Victim rights and comp
CRM	3850	Drugs and Society	3	Fall 2021	History of drug use and drug laws; relationship between drug use and crime; drug offenses and the criminal justice system; treatment and prevention issues.
CRM	3900	Race, Crime, and Justice	3	Fall 2021	Racial and ethnic disparities in crime and justice both reflect and contribute to social injustice. Theories and research provide insight about individual biases and structural racism that are evident in criminal justice practices, policies, and instituti
CRM	4000	Special Top In Criminology	3	Spring 2021	This course investigates special topics or emerging issues within criminology. Topics are selected for their importance or the expertise of the instructor.
CRM	5000	Criminology Independent Study	3	Spring 2021	Supervised research project which results in a major research paper.
CRM	5100	Criminological Theory	3	Fall 2021	The nature of criminological theory and the major theoretical developments that have shaped criminology.
CRM	6003	Internship	3	Fall 2021	Supervised work experience in a criminal justice agency.
CRM	6006	Internship	6		Supervised work experience in a criminal justice agency.
CRM	6009	Internship	9		Supervised work experience in a criminal justice agency.
CRM	6500	Senior Seminar	3	Fall 2021	This course focuses on a particular substantive area and integrates criminological theory and research methodology.
CSC	1010	Programming for All	3	Fall 2021	Programming fundamentals using the Python programming language: data, variables, selection, loops, arrays, input/output, basic graphics and functions. Object-oriented design: encapsulation, objects, classes and methods.
CSC	1020	Computing and the Web	3	Fall 2019	Information representation and manipulation; file systems and directories; compatibility and data exchange; security and privacy; elements of computer architectures and operating systems; computer networks, the Internet, and the World Wide Web; web site d
CSC	1030	Prob Solv with Computers	3	Fall 2017	Using the microcomputer as a problem solving tool; system use; general purpose language programming; spreadsheet analysis and modeling; retrieving information from the Internet; strengths and weaknesses of computer based problem solutions.
CSC	1035	Databases for Many Majors	3	Spring 2021	No background in computing necessary. Design and implementation of your own database as a group project. Cooperative learning techniques to demystify key concepts: the relational model, normalization, the Entity-Relationship model and SQL.
CSC	1040	Computing with Images	3	Spring 2021	Computing systems as tools for designing and publishing graphically rich material in many forms; image processing techniques and systems; image style and related tools; digital image processing theory; computational complexity; multimedia presentations.
CSC	1043	Laptop Instrument	3	Spring 2018	Music structure and theory; programming structures, algorithms and language to create music on your laptop; component of Living in the KnowlEdge Society project (NSF) connecting computing with other disciplines.
CSC	1045	3D Modeling and Animation	3	Spring 2019	Computer-assisted animation & its programming dialects; cartoon creation from storyboarding to product delivery; algorithms - efficiency, correctness, understanding via animation.
CSC	1051	Algorithms & Data Struc I	4	Fall 2021	Object-oriented design: objects, classes, methods, encapsulation; programming fundamentals: data, variables, selection, loops, arrays, input/output; exceptions. EXCLUSION: This course may not be taken by students who have already taken and passed ECE 1
CSC	1052	Algorithms & Data Struc II	4	Fall 2021	Object-oriented design: inheritance, interfaces, polymorphism; problem analysis; recursion; abstract data types; dynamically linked structures; data structures: stacks, queues, lists, collections, trees, maps, priority queues, library collections framew
CSC	1300	Discrete Structures	3	Fall 2021	Mathematical structures that support computer science: sets, matrices, trees, graphs, logic and proof, mathematical induction, relations, functions, sequences, summations, and elementary combinatorics.
CSC	1600	Operating Systems	3	Fall 2019	System software design and implementation; process and resource management; concurrency, scheduling, and deadlock; memory management; file systems and security.
CSC	1700	Analysis of Algorithms	3	Fall 2021	Efficiency classifications and mathematical analysis of recursive and nonrecursive algorithms; design techniques: brute force, greedy, divide-and-conquer, dynamic programming, backtracking, branch-and-bound, space and time tradeoffs; NP-completeness; appr
CSC	1800	Organ of Prog Languages	3	Fall 2021	High level language features: data types, control structures; formal lexical and syntactical analysis; operational semantics; language translation.
CSC	1930	Explorations in Computing	3	Spring 2018	Emerging technologies & their applications; computing in support of investigations & applications in the humanities & social sciences.
CSC	1990	Enrichment Sem in Computing	1	Fall 2021	Skills for success in computing: research questions and methodologies, oral and written presentation techniques, argumentation and critical thinking, time and project management strategies, study skills.

CSC	2000	Digital Divide,Theory&Praxis	1	Spring 2021	Students will research the effects of the digital divide and implement a program that addresses the needs of underserved high school students preparing for their transition to college.
CSC	2014	Java Bootcamp	1	Fall 2021	Fast-paced coverage of object-oriented programming using Java and the Java API, including packages for creating graphics and applets; Java syntax and control structures; arrays; designing objects, classes, and methods; graphical user interfaces; input str
CSC	2053	Platform Based Computing	3	Fall 2021	Python APIs, internet programming and security, mobile app programming, a team project.
CSC	2300	Statistics for Computing	3	Spring 2021	Probability, counting, discrete and continuous distributions, descriptive and inferential statistics, experimentation, reading of scientific papers -- all taught from the point of view of computer science. Some programming may be required.
CSC	2400	Computer Systems I	3	Fall 2021	Architecture of computer systems: representation of data; processor, memory and I/O organization. Assembly language programming. C programming language constructs and their relationship to the underlying architecture. Basics of operating systems: inter
CSC	2405	Computer Systems II	3	Spring 2021	Processes, threads and concurrent programming. Scheduling and dispatching. Linking and relocation. Memory management. Virtual memory. System-level I/O Device management. File systems. Security and protection in depth. Real-time and embedded systems.
CSC	2500	Survey of Information Science	3	Spring 2020	Brief introductions to several areas in which problems in information use are important. Examples are business, law, biology, medicine, electronic commerce, and libraries.
CSC	2993	Internship in Computing	3	Fall 2021	Internship in computer science involving computer system development, maintenance, or evaluation in an environment which supports sound software engineering techniques. Restricted to second semester sophomore with junior standing and above.
CSC	3010	Overview of Cybersecurity	3	Fall 2021	Exploration of the basic concepts and terminology in cybersecurity for students from a variety of technical or non-technical backgrounds; major sub-disciplines of cybersecurity; impact of cybersecurity on business, ethical, and technical levels; data prot
CSC	3070	Emerging Technology Trends	3	Fall 2018	Investigate new technologies and current applications. Explore when and how to apply new technologies with sensitivity to feasibility, financial viability, and overall effectiveness. Culminates in team-driven exploitation of a new technology.
CSC	3080	Info Security & Protection	3	Spring 2021	Explores the criticality of protecting information's availability, accuracy, authenticity, confidentiality, and integrity. Analysis of topics to include redundancy, backup and recovery, business continuity, security technologies, and controls such as aud
CSC	3150	Game Development	3	Spring 2019	Theory of game development, game programming, artificial intelligence, state machines, 2D/3D assets, visual communication, game mechanics, navigation meshes, path planning.
CSC	3300	Linear Algebra for Computing	4	Spring 2021	Fields, vectors and vector spaces, linear transformations, matrices and matrix algebra, eigenvalues and eigenvectors; Structures and computations in Python for these mathematical objects; Computational applications selected from data science, machine lear
CSC	3400	Information Retrieval	3	Fall 2017	Theory and practice of location, organization, and rendering of meaningful content from largely unorganized sources.
CSC	4170	Theory of Computation	3	Fall 2021	Finite automata and regular expressions; push down automata and context-free grammars; Turing machines; Church's thesis; computability; NP-completeness.
CSC	4181	Compiler Construction	3	Spring 2021	Lexical and syntactical analysis; code generation; error recovery; recursive descent compilation; handling of run-time environment.
CSC	4300	Computer Graphics	3	Fall 2021	Hardware and software in computer graphics; graphics programming language; input/output device handling; modeling in 3D space; development of interactive software.
CSC	4380	Info Visualization	3	Fall 2018	The presentation of information; visual cognition, scientific visualization, illustration presentation, color theory, motion dynamics, image processing.
CSC	4450	Digital Forensics	3	Fall 2021	In-depth study of digital evidence presentation, digital forensic techniques, and data analysis. Password cracking, encryption/decryption, volatile data extraction and network forensics of advanced forensic tools, legal and ethical issues related to fore
CSC	4480	Principles of Database Systems	3	Fall 2021	Concepts and technology of database management systems and data modeling with an emphasis on the relational model; database querying and normalization; physical data organization. A group project to design and implement a database is a key aspect of this
CSC	4500	Artificial Intelligence	3	Spring 2019	History of AI, what it is and isn't; the nature of intelligence and the question of its computer implementation; search algorithms; knowledge representation; automated deduction; machine perception techniques; machine learning; planning; problem solving.
CSC	4505	Applied Machine Learning	3		Introduction to machine learning through Python based projects; machine learning tools; supervised and unsupervised learning algorithms and modeling accuracy, bias, and overfitting issues.
CSC	4510	Machine Learn&Theory&Evolution	3	Fall 2019	The mathematical theory behind the design of software systems that adapt to new circumstances and detect and extrapolate patterns; computational complexity; neural networks; decision tree induction; genetic algorithms and genetic programming; research fou

CSC	4550	Computing for Data Science	3	Fall 2021	The computing parts of the interdisciplinary subject, Data Science. Topics include: data cleaning, data wrangling, visualization, time series, machine learning fundamentals. Python or similar libraries that support managing datasets. Students will complete
CSC	4598	Machine Translation	3	Fall 2018	Exploration of the broad field of machine translation; automated computer systems that translate human language using statistical approaches; digital representation transformations, such as readability and sentiment analysis, spam filtering, plagiarism de
CSC	4630	Software Dev and Systems	3	Spring 2021	Operating system structures; system calls; system libraries; interprocess communication; user-interface programming environments; software utilities; software portability.
CSC	4700	Software Engineering	3	Spring 2021	Management and production of software systems; the software life cycle; software design techniques and methodologies; participation in a team software development project.
CSC	4710	Info Syst Project Management	3	Fall 2019	Principles and techniques of information systems project management; qualitative and quantitative essentials to include project integration, scope, schedule, cost, quality, human resources, communications, and risk. Practical experience managing a projec
CSC	4730	Human Computer Interaction	3	Fall 2019	Design of the user/system interface; measurement of human-computer interaction; models of the user and user communities; design criteria for the interface; user interface management systems (UIMS); test and evaluation strategies and tools.
CSC	4790	Senior Projects	3	Fall 2021	Capstone course centered around a semester long software development or research project; project planning; requirements elicitation and specification; teamwork; oral presentations required of all students.
CSC	4797	Information Systems Capstone	3	Spring 2020	A cumulative experience to complete a student's portfolio of expertise in information systems and technology. Student driven project emphasizing system integration, design and communication skills. Prerequisites: Information Systems majors or FIT certific
CSC	4800	Web Application Development	3	Spring 2019	Theory and design of web-based applications: stylesheets, applets, HTML, CGI programming, web server design, website design, security, multimedia representations, encryption, compression.
CSC	4810	Mobile App Development	3	Spring 2021	Theory and practice of designing apps for mobile devices; interface design, platform-specific and platform-independent programming, sensor-based computing, cloud data management, security, and privacy; entrepreneurial practices for app development: ideati
CSC	4900	Networks and Security	3	Spring 2021	Organization of computer networks (eg., the internet); TCP/IP protocols; switching and routing methods; IP addressing and forwarding; TCP flow and congestion control; client-server communication; cryptography: secret-key, public-key, digital signatures; s
CSC	5920	Logic	3		Boolean connectives and propositional logic; quantifiers and first-order logic; natural deduction, resolution and other methods of human or computer reasoning; set theory; induction; formal arithmetic.
CSC	5930	Topics Computer Science	3	Fall 2021	Lecture presentation of selected topics in computer science. May be repeated for credit if topics are different. Prerequisites may be imposed depending on the topics.
CSC	5940	Topics in Information Science	3		Lecture presentation of selected topics in information science. May be repeated for credit if topics are different. Junior standing.
CSC	5993	Independent Study	3	Fall 2021	Reading, research and/or projects in a selected area of computer science under the direction of a member of the staff. May be repeated for credit.
CST	2100	Intro. to Cultural Studies	3	Fall 2021	Theoretical basis of cultural studies is covered; students are introduced to the most common methods of research in these areas. Mandatory for CST majors, open to others.
CST	4100	Capstone Sem of Cultural Stud	3	Spring 2019	Application of different theoretical approaches to the study of cultural phenomena and praxis in a major research project, a senior thesis. Mandatory for CST majors, open to others.
CST	5900	Independent Study	3	Fall 2021	
DIT	2370	Global Business Ethics	3		Interactive study of business ethics within a global economy. Alternative ethical theories across and within different cultures are presented. Both Western and non-Western traditions are explored to develop a framework useful to address ethical challenges
ECE	1205	ECE Freshman Projects	3	Spring 2021	Project-based introduction to engineering course for freshman electrical and computer engineering majors.
ECE	1620	Egr Prog & Applic	3	Spring 2021	Engineering problem solving using the C programming language, C control structures, data files, debugging, functions, arrays, elementary data structures, and pointers. Two lecture hours per week and 1 lab period per week.
ECE	2030	Electrical Circuit Fundamental	3	Fall 2021	Basic concepts, steady-state dc circuit analysis, network theorems, energy storage elements, complete response of first-order circuits, steady-state sinusoidal circuit analysis, AC systems and Laplace Transform.
ECE	2031	Elect Circuit Fundamentals Lab	1	Fall 2021	Must be taken concurrently with ECE 2030. Laboratory exercises cover electrical safety and laboratory practice, basic instrumentation, computer-aided circuit analysis, and application of electronic devices.
ECE	2042	Fundamentals of CPE I	3	Fall 2020	Number systems (signed and unsigned), conversions, Binary arithmetic, digital logic design both combinatorial and sequential, counters and state machines as well as learning VHDL (a hardware creation language) to implement the digital logic.
ECE	2043	Fund of Comp Engineering I Lab	1	Fall 2020	This laboratory course is intended to be taken concurrently with ECE 2042. The laboratory includes exercises on logic design and on programming FPGA's using the VHDL language.

ECE	2044	Fundamentals of CPE II	3	Fall 2021	The fundamentals of computer operation will be explored with emphasis on how to interface with a general-purpose processor. An ARM processor will be utilized to demonstrate memory mapped I/O, assembly programming, interrupts, serial communication, and per
ECE	2045	Fund Comp Engineering II Lab	1	Fall 2021	This laboratory course is intended to be taken concurrently with ECE 2044. The laboratory utilizes an ARM microcontroller with assembly and C programming examples
ECE	2052	Fund Electrical Engineering I	3	Spring 2018	Basic concepts, steady-state dc circuit analysis, network theorems, ideal op-amp circuit analysis, energy storage elements, complete response of first-order circuits, steady-state sinusoidal circuit analysis and the phasor diagram.
ECE	2053	Fund Elect Engineering I Lab	1	Spring 2018	Must be taken concurrently with ECE 2052. Laboratory exercises cover electrical safety and laboratory practice, basic instrumentation, computer-aided circuit analysis, and applications of electronic devices.
ECE	2054	Fund of Elect Engineering II	3	Spring 2018	Second-order circuits, complex-frequency (s-domain) analysis, network functions, RMS value, superposition of average power, maximum power transfer, frequency response (Bode) plots, ac power, balanced three-phase circuits, resonance, magnetically-coupled c
ECE	2055	Fund Elect Engineering II Lab	1	Spring 2018	Must be taken concurrently with ECE 2054. Laboratory projects in system design that employ both analog and digital electronic components and various types of input/output devices.
ECE	2290	Engr System Models & Control	4	Spring 2021	Modeling and analysis of electrical, mechanical, and electromechanical systems; open-loop and feedback systems; frequency domain models; state equations; linearization, time response; steady-state error; block diagrams and signal flow graphs; stability cr
ECE	2409	Fundamentals of MATLAB	2	Fall 2021	Use of MATLAB, a matrix oriented, high level programming language, for the simulation and modeling of physical systems. Matrix operations, extensive 2-dimensional and 3-dimensional graphing, introduction to MATLAB toolboxes. Lectures are conducted in par
ECE	2430	Embedded Systems I	3	Spring 2021	Introduction to logic design and digital computer fundamentals. Topics include computer arithmetic, Boolean algebra and logical design, basic concepts of computer architecture, programming and interfacing microcontrollers.
ECE	2431	Embedded Systems I Lab	1	Spring 2021	This laboratory course is intended to be taken concurrently with ECE 2430. The laboratory includes exercises on logic design and on programming and interfacing microcontrollers and programmable logic devices.
ECE	2530	Analog Electronics I	3	Spring 2021	Basic electronic concepts. Waves and particles, semiconductor device physics, diodes and BJT circuits and amplifier circuits.
ECE	2531	Analog Electronics I Lab	1	Spring 2021	Must be taken concurrently with ECE 2530. Electronic circuit applications are investigated through laboratory design projects on semi conductor device physics, diodes and BJTs.
ECE	2550	Intro to Electronics & Applic.	2	Spring 2018	Basic electronic concepts. Electronic circuit applications are investigated through the creation of laboratory design projects which address contemporary topics in Electrical Engineering.
ECE	2620	C++, Algorithms & Data Struct	4	Fall 2021	C++ classes, access rules, inheritance, friends, abstract classes, passing parameters by value, by reference, polymorphism in functions and operators, static and dynamic binding, templates; searching, sorting; pointer implementation of lists, stacks, queue
ECE	2800	Prof. Dev. Seminar	2	Fall 2021	Various professional development activities including: initiation into mentoring program, introduction to engineering ethics and professional responsibilities, field trips and other events on contemporary issues, peer evaluation process, development of or
ECE	3225	Signal Processing	3	Fall 2021	Signal representation, Fourier series, Fourier transform, discrete-time systems, convolution, discrete-time Fourier transform, Z-transform. Practicum includes MATLAB exercises on transform properties and their use in modulation and filtering. Three lectu
ECE	3230	Signals Lab	1	Fall 2021	Use of MATLAB on filtering, channel equalization, music synthesis and spectrum analysis. Two-hour practicum per week.
ECE	3245	Discrete Time Signals & System	3	Spring 2021	Discrete-time signal and system representation; sampling of continuous signals; discrete-time Fourier and Z-transformations; frequency content of signals and frequency response of systems; systems analysis and filtering.
ECE	3430	Embedded Systems II	3	Fall 2021	Digital logic families with primary emphasis on external electrical characteristics of the logic devices. Applications and designs at the board-level, involving topics such as series/parallel conversion and analog/digital conversion.
ECE	3445	Computer Architecture	4	Fall 2021	Fundamentals of instruction sets and their efficient execution - e.g., pipelines, caches, out-of-order execution, and branch prediction mechanisms. Performance analysis, superscalar, VLIW, multithreading, and multiprocessing are among the topics studied.
ECE	3450	Digital Electronics	3	Fall 2021	Digital logic families with primary emphasis on external electrical characteristics of the logic devices. Applications and designs at the board-level, involving topics such as series/parallel conversion and analog/digital conversion.
ECE	3476	Computer and Network Security	3	Spring 2021	Computer security in the context of the Internet, including hands-on exercises and experiments in the areas of authentication, attacks and threats, email and communication digital signatures and encryption, mobile devices, privacy, safe browsing and certi
ECE	3500	Electronic Materials & Devices	4	Fall 2018	Physics of crystal structures, energy bands, Fermi level, charge carriers, the pn junction, and excess carriers. Devices: diodes, bipolar junction transistors and field effect transistors. Three lecture hours and a two-hour practicum per week.
ECE	3530	Analog Electronics II	3	Fall 2021	Analysis, design, and simulation of analog electronic circuits. Single and multistage amplifiers, amplifier frequency response, power amplifiers, linear and nonlinear op-amp circuits, active filters, oscillators. MOSFET and CMOS circuits.

ECE	3531	Analog Electronics II Lab	1	Fall 2021	Must be taken concurrently with ECE 3530. MOSFET DC Circuits, Device Parameter Extraction from BJT and MOSFET, Single and Multistage Amplifier Designs & frequency response, Power Amplifier Design with Thermal Design Considerations (Application of Heat Sin
ECE	3550	Analog Electronics	4	Fall 2018	Analysis, design, and simulation of analog electronic circuits. Single and multistage amplifiers, amplifier frequency response, power amplifiers, linear and nonlinear op-amp circuits, active filters, oscillators. Three lecture hours and a two-hour pract
ECE	3600	Operating Systems	3	Fall 2021	System software design and implementation; process and resource management; concurrency, scheduling, and deadlock; memory management; file systems and security.
ECE	3690	Engineering Electromagnetics	4	Spring 2021	Maxwell's equations, plane waves, dissipative media, reflection and transmission of waves at an interface, metallic and optical waveguides, transmission lines, linear and array antennas. Practicum includes computer projects, laboratory demonstrations and
ECE	3720	Eng Probability & Statistics	3	Fall 2021	Basic set theory, axioms of probability, probability relationships. Concepts of a random variable. Joint random variables. Selected topics in statistics from: estimation, hypothesis testing and regression. Selected topics from: functions of a random
ECE	3770	Electrical Communications	4	Spring 2021	Analog and digital communications systems: characterization of communication channels, bandwidth and signal distortion; AM and FM, FM stereo and Dolby noise reduction; sample and hold, source encoding, matched filtering, digital modulations and error con
ECE	3970	Design Seminar - EE	2	Spring 2021	Areas and career paths in electrical engineering. Overview of required senior project courses and faculty project sponsors. Engineering design, project selection requirements, technical communications, information gathering. Requires selection of desig
ECE	3971	Design Seminar - CPE	2	Spring 2021	Areas and career paths in computer engineering. Overview of required senior project courses and faculty project sponsors. Engineering design, project selection requirements, technical communications, information gathering. Requires selection of design p
ECE	4290	Engr System Models & Control	4	Spring 2019	Modeling and analysis of electrical, mechanical, and electromechanical systems; open-loop and feedback systems; frequency domain models; state equations; linearization; time response; steady-state error; block diagrams and signal flow graphs; stability cr
ECE	4470	Computer Networks	4	Spring 2021	ISO/OSI, TCP/IP reference models; data transmission, encoding, framing, error detection, stop-and-wait, sliding windows; CSMA/CD, Ethernet; bridges, spanning tree protocol; connectionless, connection-oriented and source routing, IP addressing, forwarding,
ECE	4810	Intro. to Electric Energy Sys.	3	Fall 2021	Fundamentals of energy conversion and storage, conventional and renewable sources of energy, introduction to the electric energy system grid, control and economic operation of the electric energy system grid, and introduction to smart grid and smart meter
ECE	4970	Design Project - EE	3	Fall 2021	Completion of the design project presented in ECE 3970. Requirements: written and oral progress reports, demonstration of achieved objectives, formal written final report, oral presentation. Design groups meet weekly with their instructors. Senior stan
ECE	4971	Design Project - CPE	3	Fall 2021	Completion of the design project presented in ECE 3971. Written and oral progress reports, demonstration of achieved objectives, formal written final report, oral presentation. Design groups meet weekly with their instructors. Senior standing.
ECE	4972	Design Project Report - EE	1	Fall 2021	Preparation and presentation of a final written report and a formal presentation of each project team's senior design project completed in ECE 4970.
ECE	4973	Design Project Report - CPE	1	Fall 2021	Preparation and presentation of a final written report and a formal presentation of each project team's senior design project completed in ECE 4971.
ECE	5010	ECE Summer Internship	3	Summer 2021	Academic credit for a summer internship. Requirements: Senior standing, a technical GPA of 3.0 or greater, and sponsorship by a full-time faculty member arranged prior to the start of the internship. Program details available from the Electrical and Comp
ECE	5240	Multimedia	3	Fall 2017	Algorithms and standards that make possible multimedia communication and storage over the internet, including baseline JPEG, JPEG 2000, video compression (MPEG-1, 2, 4), audio compression and MP3, DVD, video conferencing and streaming, multimedia over bro
ECE	5250	Biomedical Instrumentation	3	Fall 2021	Introductory course in Biomedical Engineering emphasizing human physiology & medical measurement tools & techniques. Topics include the nervous system, the cardiovascular system & the respiratory system.
ECE	5251	Biomedical Signal Processing	3	Spring 2020	Signal processing of biomedical signals. Cardiac, neurological, & electromyographic signal processing. Biomedical signal filtering, frequency analysis, spectrum estimation & physiological information extraction. Prerequisites: EGR 2021 or equivalent.
ECE	5252	Medical Imaging	3		Principles of structural and functional medical imaging modalities: X-ray, Computed Tomography (CT), Magnetic Resonance Imaging (MRI), ultrasound and optical imaging. Fundamentals of biomedical image analysis: image acquisition and display, image enhancem
ECE	5390	Control System Design	4	Spring 2021	Problem formulation, design techniques and evaluations, time domain and frequency domain design methods. Incorporates computer-aided analysis and design in conjunction with required laboratory projects. Three lecture hours and a two-hour practicum per wee

ECE	5400	Applied Machine Learning	3	Fall 2019	Introduction to machine learning models and algorithms; Software techniques such as compression and pruning to enable efficient processing of neural networks. Hardware accelerators for training and inference process. Hardware/software optimization for use
ECE	5450	Microcontrollers & Applic	3	Fall 2021	ARM-Based microcontroller design and the following related topics: General purpose input/output, counters/timers, pulse-width modulation, A/D conversion, stepper motor control, use of integrated development environments, practical application programming
ECE	5451	Adv Microcontroller App Design	3	Spring 2017	Communications and complex inputs/outputs in ARM-based microcontroller design: Fast input/output, I ² C bus, UARTs, SPI bus, CAN bus, vectored interrupts, USB, JTAG, in-application flash programming. Implementation of real-world designs using the C program
ECE	5478	Eng Secure Cyber-Physical Sys	3	Fall 2019	Cyber-Physical Systems include home automation and protection, connected vehicles, connected medical devices, drones, smart buildings and cities, and industrial control systems. Secure engineering of cyber-physical systems leading to a safer and more sec
ECE	5480	Android Mobile Dev Programming	3	Fall 2017	The Android software stack and the underlying device sensors. Topics covered: Mobile Design Considerations, Java Language Primer, Android SDK, Threading, Geolocation Services, NFC, Bluetooth, Wi-Fi Direct, Common Device Sensors, Persistence, Accessing Web
ECE	5690	Microwave Networks	4	Fall 2021	Plane wave propagation; propagation in TEM transmission lines and waveguides; IMPATT; TRAPAT; Gunn-Effect and parametric devices; microstrip lines and microwave integrated circuits; laboratory work includes measurement of SWR, impedance, and power at micr
ECE	5730	RF Circuit Design	3	Spring 2021	Design of active circuits and antennas for RF and wireless systems, including semiconductor control circuits, S-parameter based amplifier and oscillator design, mixers, and antennas for portable and base station applications. CAD tools and laboratory-base
ECE	5770	Organs-on-a-Chip	3	Spring 2021	Microfluidic electrochemical biomimetic systems as a physical micron-scale model of a human organ for sensing pharmaceutical, cosmetics, and food ingredients toxicology. Combine fundamentals of field effect circuits, optics, fluid mechanics, soft-lithogra
ECE	5900	Special Topics	3	Fall 2020	Addresses a special topic in electrical and/or computer engineering of interest to faculty and students.
ECE	5991	Elec Eng Research I	3	Fall 2021	Students work with faculty on current research topics. Weekly meetings with faculty adviser and a final written report and/or oral presentation are required.
ECE	5992	Elec Eng Research II	3	Fall 2021	Continuation of ECE 5991.
ECO	1000	Introductory Topics-Economics	3		An examination of basic Micro- and Macroeconomic topics. CANNOT COUNT FOR ECONOMICS MAJORS.
ECO	1001	Intro to Micro	3	Fall 2021	The price system; demand and supply analysis; the production process; analysis of market structures.
ECO	1002	Intro to Macro	3	Fall 2021	The economic system and its fundamental principles. The economic functions of government, monetary and fiscal policy, and international trade.
ECO	1565	Topics: Study Abroad	3		Specific topics vary. Only for study abroad. Cannot count for Economics major. May be taken more than once.
ECO	1903	Internship Elective	3	Fall 2021	Fulfills 3.0 free elective credits.
ECO	1906	Internship Elective	6	Summer 2021	Fulfills 6.0 free elective credits.
ECO	1909	Internship Elective	9	Fall 2017	Fulfills 9.0 free elective credits.
ECO	2101	Macro-Econ Theory	3	Fall 2021	The components of aggregate economic growth. Theories underlying public policies which attempt to achieve the objectives of price stability, full employment and economic growth in the United States.
ECO	2102	Micro-Econ Theory	3	Fall 2021	Economic and mathematical analysis of the equilibrium conditions of the household, the firm, and industry, in various market structures, together with a brief examination of the general equilibrium of the economy; emphasis upon developing a working knowle
ECO	2130	Intro to R Prog for Econ & Fin	1	Fall 2020	Fast paced coverage of R. Topics include libraries, tidyverse, IO, data types and storage, data analysis and display, function writing, higher order functions vs loops, and performance.
ECO	2993	Internship	3	Fall 2021	Fulfills 3.0 economic elective credits.
ECO	2996	Internship	6	Summer 2021	Fulfills 6.0 economic elective credits.
ECO	3106	Econ of Money & Banking	3	Fall 2021	Principles of money, banking and financial markets; the relationship of the monetary and banking system to the functioning of the economy; the theory and practice of monetary policy; the function of money in international payments.
ECO	3107	FED Challenge	3	Fall 2021	Competition style course structured to combine concepts of Federal Reserve monetary policy and advanced macroeconomic analysis with enhanced presentation skills. Students will be selected from the class to represent Villanova in an intercollegiate Fed Cha
ECO	3108	Global Political Econ	3	Fall 2021	Socio-economic conditions, political history, and government policy and the global impact on international trade and monetary relations; regional integration; stability of international economic systems; economic development and transition strategies; rol
ECO	3109	International Economics	3	Fall 2020	Comparative advantage; gains from foreign trade; Heckscher-Ohlin doctrine; technology and product cycles; tariff theory and policy; Other protection measures; economic integration; foreign exchange rates; fixed and flexible rates; balance of payments; mul
ECO	3111	Hist of Economic Thought	3	Summer 2021	The evolution of economic analysis within the context of contemporary economic institutions and associated social, ethical, and political thought.

ECO	3112	Public Sector Economics	3	Fall 2021	The economic roles of various levels of government and the theory and practice of public expenditure and taxation. Government's impact on the allocation of resources and the distribution of income in a mixed economy.
ECO	3118	Women and the Economy	3	Fall 2021	The role of women in the economy and its implications. Economics of the household, marriage, fertility, divorce unemployment, earnings of women and occupational choice. International comparisons and current public policy issues.
ECO	3120	Financial Economics	3	Fall 2021	This course introduces students to the subject matter of corporate finance and financial economics. Topics covered include The Time Value of Money, Interest Rates, Stocks and Bonds, Firm Valuation, Investment Risk and Return, Corporate Financing, Capital
ECO	3123	Labor Economics	3	Spring 2021	Economic theories concerning the employer's labor demand, the individual's labor supply, educational/occupational choices, labor unions, on-the-job training, discrimination, labor market mechanisms and wage determination. Public policies which affect the
ECO	3124	Economics of Sports	3		Key economic concepts and theories of Industrial Organization and Public Policy, Public Finance, and Labor Economics, discussed in the context of the sports industry. An in-depth look at related econometric research of sports economists.
ECO	3125	Industr Org & Public Pol	3	Fall 2021	Economics of American industrial organization; market structure, conduct, and performance; the workability of competition in selected industries; the application of public policy and anti-trust law.
ECO	3126	Amer Econ Development	3	Spring 2021	Growth of the American economy in terms of its various sectors and their interrelations; the evolution of important economic institutions and ideas and of the role of the entrepreneurs.
ECO	3127	Econ Underdeveloped Area	3	Fall 2021	Structural change in the process of development; growth patterns and income distribution; determinants and role of saving, investment, technological change; strategy and methods of development planning; the role of government; social institutions.
ECO	3128	Intro Mathematical Econ	3	Fall 2016	Variables and functions, matrices and determinants, difference equations, and calculus. Applications to economic and business problems, including market equilibrium, revenue and cost functions, marginal theory, maximization problems, input-output analysis
ECO	3130	Programming for Econ & Fin	3		Programming in R for economics and finance applications. Topics include libraries, tidyverse, IO, data types and storage, indexing/slicing, data wrangling, regression, display, function writing, control structures, loops, higher order functions, performan
ECO	3133	Economics of Healthcare	3	Spring 2021	Examination of health as a durable good and specific markets for services to enhance health, including physician, nursing, hospital, and private insurance. The role of government and comparison to health care systems and outcomes in other countries are al
ECO	3135	Case Studies Amer Indust	3	Spring 2018	Structure and conduct of selected industries in the U.S. Economy chosen from the manufacturing, finance, energy, public utility, and transportation sectors. Effects of government policies such as regulation, deregulation, antitrust, subsidization, and pro
ECO	3137	Intro to Econometrics	3	Fall 2021	Intermediate course in stochastic methods with emphasis on applications; estimation, hypotheses testing, regression analysis, economic forecasting, time series analysis and probabilistic formulation of economic relationships such as consumption and produc
ECO	3138	Game Theory	3	Fall 2021	Basic game theoretic framework, concepts and applications; mathematical models to understand the behavior of humans in strategic situations.
ECO	3139	Behavioral Economics	3		Examine cutting edge theories of how cognitive, psychological, social, and emotional factors affect economic decisions. Evidence from lab and field experiments is presented to support these behavioral models.
ECO	3140	Urban Economics	3	Spring 2019	Utilizes economic theory to examine the major contemporary issues confronting urban areas; explores economic solutions to the problems of housing, transportation, education, poverty, crime, growth, employment, taxes and redevelopment.
ECO	3200	Topics in Economic	3	Spring 2021	Selected topics in economics currently of interest to faculty and students.
ECO	4132	Seminar in Economics	3	Spring 2021	Capstone course requiring students to utilize the tools of analysis and expression, including not only economic theory and applications, but also writing, speaking and mathematics. Computer skills expanded.
ECO	4200	Advanced Topics in Economics	3	Fall 2021	Selected topics in economics currently of interest to faculty and students.
ECO	4201	Dynamic Macroeconomic Theory	3	Spring 2021	Modern methods used in macroeconomic research based on microeconomic principles; dynamic processes of economic growth and business cycles; impact of rational expectations on fiscal and monetary policies; mathematical tools for dynamic economic models.
ECO	4203	Pol Eco of Development Aid	3	Fall 2020	This course examines foreign aid using a variety of economic approaches and tools including growth models, a public choice approach, principal-agent theory, and econometric analysis. Building on the history and institutions of foreign aid, we will delve i
ECO	4205	Time Series Analysis	3	Fall 2018	Introduction to methods of time series analysis including univariate models, trends, seasonality, structural breaks, forecasting, policy analysis, vector autoregression and panel techniques.
ECO	4207	Economics of Risk&Uncertainty	3	Fall 2021	Capstone course. Analyze microeconomic and macroeconomic situations involving risk, uncertainty, and ambiguity. Applications of expected utility theory and mean-variance theory in insurance, behavioral economics, and finance. Applications of empirically m

ECO	4209	International Macroeconomics	3	Fall 2021	Capstone course. Open economy macroeconomic theory, monetary and asset-based exchange rate models; flexible vs. fixed exchange rate regimes; gains from financial globalization; financial and currency crisis; currency unions.
ECO	4210	Experimental Economics	3	Spring 2021	Capstone course. Read seminal papers that use experiments to test economic theories. Learn how to properly design and conduct experiments.
ECO	4500	Independent Study in Eco	3	Fall 2021	Students with specific interests work on a tutorial basis with faculty. A departmental independent Research Proposal form must be approved by the directing faculty member and the department chairman prior to registration.
ECO	4650	Service Learning Practicum	1		Service experiences as an integral part of certain ECO courses. Integrates the participation requirements for the field experience with the academic requirements (readings, research paper, project, etc.) set by the instructor. Permission of the instructor
EDU	1900	Literacy Instrn for Tutors	1	Fall 2019	Workshop using a strength-based approach to provide an overview for tutoring school-aged children (K-12) in an afterschool setting. Intended for students who have some experience tutoring. 1 credit
EDU	2201	Social Foundation Educ I	3	Fall 2017	Major movements in the history of education to 1600 with emphasis on their social and philosophical context; historical development of educational aims, curriculum and types of education; religious and political influences on education.
EDU	2202	Social Foundation Educ II	3	Fall 2021	Development of public and private education in America in its social and philosophical context; types of education, governmental activity in education, educational finance, religious and political influences, impact of European developments.
EDU	2253	History of American Education	3	Fall 2021	Focus on the people, ideas, issues and controversies that have created the current American school system. Will chronicle attempts to include (and sometimes exclude) an expanding school population as racial, gender, religious and health issues became conf
EDU	2300	Research Seminar in Education	3	Spring 2021	An opportunity for students to become acquainted with the various approaches to inquiry in educational research and to design a small scale research project. Students will learn how to locate, analyze and use both qualitative and quantitative research repo
EDU	3000	Prof. Development in Education	1	Spring 2021	Required course upon entry in the Teacher Certification Program. Introduction to competencies required for state certification, Standards Aligned Systems, national and state teaching standards and code of conduct and evaluation methods leading to state li
EDU	3220	Young Adult Literature	3		Students will identify and critically evaluate effective practices in YA literacy instruction; analyze YA literature through the lens of diversity, equity and inclusion, and approach the instruction of YA literature through an equity, strengths-based, cul
EDU	3251	Psych of Teaching & Learning	3	Fall 2021	The application of learning theory to classroom teaching.
EDU	3253	Educational Policy Analysis	3	Spring 2020	Examines the challenges facing public schools, the policies that are designed in response to these challenges, the effects of these policies on students, and efforts undertaken by some youth to improve education policy. Core course for Educational Policy
EDU	3258	Education & Society in 1960s	3	Fall 2021	The relationship between educational developments and social change in the decade of the 1960s. The emergence of a distinctive youth culture and the educational impact of the civil rights and women's rights movements of the era.
EDU	3260	World War II Experience in EDU	3	Fall 2018	The impact of World War II on education and culture in the United States and foreign societies. Including educational experiences for women and ethnic and racial minorities.
EDU	3262	Edu Pearl Harbor to Sputnik	3	Fall 2021	The impact of World War II and the Cold War on American schools and society. The expansion of educational opportunities for women, ethnic and social minorities. The influence of advances in communications and technology on educational issues of the 1940s
EDU	3263	Diversity and Inclusion	3	Fall 2021	Introduction to the physical and social characteristics of diverse and exceptional students between 3 and 21. Issues of race, culture, gender, sexual orientation, and special education with respect to schools and in light of recent legislation and court
EDU	3264	Intro to Disability Studies	3	Fall 2021	Social, political, cultural and academic implications of disability; legacy of disability in the US and abroad; strategies for working with individuals with special needs. Service learning is required.
EDU	4242	Special Topics: Education	3		Work in critical analysis of selected topics in education, reflecting various historical, philosophical, and societal perspectives and methodologies.
EDU	4245	Literacy & Eng Lang Learning	3	Fall 2021	Techniques for literacy evaluation; methods of teaching literacy and English as a second language; strategies for basic skill development and student observation in the schools.
EDU	4281	Meth English Sec School	3	Fall 2019	The curriculum, planning units and lessons in the teaching area; general methods of teaching, special methods and instructional materials in the subject, including textbooks, courses of study and reference works; application of the principles and techniq
EDU	4282	Meth Fgn Lang Sec School	3	Fall 2021	The curriculum, planning units and lessons in the teaching area; general methods of teaching, special methods, and instructional materials in the subject, including textbooks, courses of study and reference works; application of the principles and techniq
EDU	4283	Meth Math Sec School	3	Fall 2020	The curriculum, planning units, and lessons in the teaching area; general methods of teaching special methods, and instructional materials in the subject; including textbooks, courses of study and reference works; application of the principles and techniq

EDU	4285	Meth Soc Stud Sec School	3	Fall 2021	The curriculum, planning units, and lessons in the teaching area; general/ methods of teaching, special methods, and instructional materials, in the subject, including textbooks, courses of study and reference works, application of the principles and tech
EDU	4289	Education Independent Study	3	Spring 2018	Supervised independent study, specific requirements will be determined by the faculty member. Students may only register for this class once with special permission of chairperson.
EDU	4290	Philosophy of Education	3	Fall 2021	The development of a sound personal philosophy of education and practice in applying that philosophy to current educational issues.
EDU	4291	Student Teaching	9	Fall 2021	Observation and teaching under actual classroom conditions in the student's field of teaching specialization; open only to students of the Senior year who have completed all the subject matter courses in the field of specialization.
EDU	4292	Senior Seminar	3	Fall 2021	The student teaching experience; elements of school law; current educational issues; use of computers in the classroom; relationship of practice to theory; sharing of experiences, common problems and alternative teaching practices; open to student teacher
EGEN	2100	Creativity and Innovation	1	Fall 2021	An introduction to various methods, practices, and tools that can be effectively used to develop creative solutions to problems. Different exercises and assignments will be used to allow students to demonstrate their creative potential both as individuals
EGEN	2150	Intro to Entrepreneurial Techn	3	Summer 2021	Students will gain a working understanding of technologies of interest to entrepreneurs. The course will be refreshed yearly, but the initial offering is expected to include emerging technologies and day-to-day technologies. NOTE: Only available as part
EGEN	2200	Opport Identif & Bus Principl	3	Summer 2021	Foundation course for moving an idea from concept to reality. Topics include: opportunity discovery and analysis; business and engineering steps in product design; protecting ideas; prototyping; technical and business feasibility; team dynamics; introduct
EGEN	2300	Entrepreneurship Practicum I	1	Spring 2020	Provides work experience in a start-up business environment for a sophomore student registered in the engineering entrepreneurship minor program.
EGEN	3100	Feas Analysis for Entrepreneur	3	Fall 2021	Learn and apply techniques to prove or disprove the technical and business feasibility of product and service concepts. Help students understand plans and begin to create business plans for their own business concepts. Additional topics in opportunity ana
EGEN	3200	Product & Service Prototyping	3	Summer 2021	Team-based course focused on the design and construction of a proof-of-principle prototype which demonstrates a product or service. Students will create a high-level product design specification (PDS), work breakdown structure (WBS), and budget for their
EGEN	3300	Entrepreneurship Practicum II	1	Fall 2020	Provides work experience in a start-up business environment for a junior student registered in the engineering entrepreneurship minor program.
EGEN	3400	Entrepreneurship Practicum III	1	Spring 2021	Provides work experience in a start-up business environment for a junior student registered in the engineering entrepreneurship minor program.
EGEN	4100	Market, Finance, and Vent Plan	3	Fall 2021	Students will experience the detailed steps in designing and commercializing a product. Development by a team of multidisciplinary engineering students of a professional quality business model for a technology based product or service of the students' ch
EGR	1000	Online Grad EGR Orientation		Spring 2017	This course provides an introduction to student services offered at Villanova University and the College of Engineering, as well as online learning and the necessary knowledge and skills required to complete courses in the blackboard e-learning environmen
EGR	1001	Career Compass First Yr A	0.5	Fall 2021	First part of the professional development program for first year engineering students focused on four areas: The Engineering Profession, Setting the Stage for Personal Success, Post-Graduation Planning, and Communicating in the 21st Century.
EGR	1002	Career Compass First Yr B	0.5	Fall 2021	Second part of the professional development program for first year engineering students focused on four areas: The Engineering Profession, Setting the Stage for Personal Success, Post-Graduation Planning, and Communicating in the 21st Century.
EGR	1200	Egr. Interdisciplinary Proj. I	3	Fall 2021	Core engineering concepts and project-based introduction to engineering course for freshmen engineering majors. First half of semester is lecture/project format emphasizing core concepts and math. Second half consists of an elective interdisciplinary proj
EGR	2001	Egr: Humanistic Context	3	Spring 2021	This course will focus on the biggest issues facing the world and the role engineering must play in the solution. Interdisciplinary engineering teams will be used to develop sustainable and humanistic solutions to real world problems.
EGR	2002	Intro to Humanitarian Engr	3	Fall 2021	The Introduction to Humanitarian Engineering is the first in a series of courses intended to provide the context for undergraduate students who are interested in engaging with international program partners on global development challenges. This course pr
EGR	2003	Career Compass Second Yr A	0.5	Fall 2021	First part of the professional development program for second year engineering students focused on four areas: The Engineering Profession, Setting the Stage for Personal Success, Post-Graduation Planning, and Communicating in the 21st Century.
EGR	2004	Career Compass Second Yr B	0.5	Fall 2021	Second part of the professional development program for second year engineering students focused on four areas: The Engineering Profession, Setting the Stage for Personal Success, Post-Graduation Planning, and Communicating in the 21st Century.

EGR	2005	Bridging Diver & Bldg Communit	3		View cultural diversities as opportunities that will enhance the creativity and overall quality of any project development process or team effort. The course will provide students with pragmatic tools for understanding and working effectively across and
EGR	2020	Physiology for Engineers	3	Fall 2021	Structure and function of biomolecules, cells, tissues, organs, and organ systems (including muskuloskeletal, circulatory, respiratory, and nervous systems).
EGR	2021	Elements of Biomed Engr	3	Spring 2021	Survey of current topics in biomedical engineering; Engineering fundamentals (e.g., mechanics of materials, dynamics, transport, signal processing) with applications to biomedical engineering.
EGR	2110	Sus Eng: Risks & Opportunities	3	Fall 2021	One of two required core courses for the Sustainable Engineering Minor that introduces whole-systems thinking to address the dynamic field of sustainability. Topics include climate change, planetary boundaries, greenhouse gas management, climate change mi
EGR	2930	Catholic Soc Teaching for EGRS	3	Spring 2021	Tradition and key themes of Catholic Social Teaching and how engineers can incorporate these themes in developing solutions to engineering problems. Engineering topics and case studies will be analyzed, with emphasis on a comparison of "greater good" and
EGR	3005	Career Compass Third Yr A	0.5	Fall 2021	First part of the professional development program for third year engineering students focused on four areas: The Engineering Profession, Setting the Stage for Personal Success, Post-Graduation Planning, and Communicating in the 21st Century.
EGR	3006	Career Compass Third Yr B	0.5	Fall 2021	Second part of the professional development program for third year engineering students focused on four areas: The Engineering Profession, Setting the Stage for Personal Success, Post-Graduation Planning, and Communicating in the 21st Century.
EGR	4000	Undergraduate Research I	1	Spring 2021	Student participation in independent research under faculty supervision, frequent conferences with advisor on literature search, theoretical and experimental research.
EGR	4007	Profess. & the Def. of Success	1	Spring 2020	Interdisciplinary course directly and specifically focused on professionalism as the path to near term and long term career success. Complimentary to senior year Capstone Design Experiences.
EGR	4008	Profess: Your Key to Success	3		An in-depth analysis of required professional skills including leadership, management, ethical behavior, team and group dynamics, time management, listening, technical writing, negotiations and self-awareness delivered through a combined lecture/seminar f
EGR	5001	Engineering Service Learning	1	Fall 2021	Service learning experience related to engineering. Mandatory weekly group meetings as well as participation in seminar series. Fee associated with course. Consent of instructor required.
EGR	5002	EGR Service Learning Leader	1	Fall 2021	Leading a service learning trip related to engineering. Mandatory weekly group meetings as well as participation in seminar series. Fee associated with course. Consent of instructor required.
EGR	5003	Engineering Svc Learning Capst	1	Fall 2021	Engineering Service Learning Capstone.
EGR	5050	Professional Practicum		Fall 2021	Provides work experience for an undergraduate student who has been offered an opportunity to work in a field directly related to their major. Permission of Department of Chair and Associate Dean required.
ENG	1050	The Literary Experience	3	Fall 2021	Introduction to literature and the methods of literary analysis. Close readings of texts. Individual sections vary in the works covered.
ENG	1842	Perspectives in Literature	3	Fall 2021	Close readings of literary texts, examined from particular thematic perspectives. Individual sections vary in the works covered. Does not fulfill Core Curriculum requirements. Preference given to freshman students.
ENG	1903	Internship Elective	3	Fall 2021	
ENG	1906	Internship Elective	6	Fall 2021	
ENG	1909	Internship Elective	9	Fall 2021	
ENG	1975	Core Lit and Writing Seminar	3	Fall 2021	Careful reading of and intensive writing about literature. Individual sections vary in themes and works covered. Restricted to Arts & Sciences students governed by the New Core Curriculum instituted in Fall 2011.
ENG	2000	Adv Expository Writing	3	Summer 2020	Practice in writing reports, reviews, arguments, description; emphasis on organization and development.
ENG	2003	Intro to Creative Writing	3	Fall 2021	Designed for students who wish to experiment with composing several kinds of creative writing: short fiction, creative nonfiction, and poetry.
ENG	2004	Writing Creative Nonfiction	3	Fall 2021	Creative nonfiction has been described as "true stories well told." Students will write, close read, and workshop "true stories," including travel writing, food writing, and the lyric essay.
ENG	2005	Writing of Short Story	3	Fall 2021	In this writing workshop course, we will explore setting, point of view, characterization, plot and other craft elements that make short stories run. We will read influential authors and give feedback to one another to foster our growth as writers.
ENG	2006	The Writing of Poetry	3	Fall 2021	Instruction in poetry writing, including how to craft imagery, figurative language, sound, line, and rhythm, as well as traditional and contemporary forms. Students read widely and write lyric, narrative and experimental poems that are shared in a support
ENG	2009	Writing the Traditional Novel	3	Fall 2020	A creative writing workshop course designed for students eager to leap into the complex process of writing a novella or short novel. Students will close-read short novels to analyze elements of craft and workshop sections of their own novel in-progress.
ENG	2012	Advanced Creative Writing	3	Spring 2019	Usually taught by visiting professors. For writers of poetry and short fiction. Reading of models of exemplary technique and application of these to students' own work. Critical feedback from peers and professors.

ENG	2013	Writing of Memoir	3	Fall 2020	Through readings of seminal essays and memoirs and writing assignments that emphasize voice, structure, research, dialogue and the reconstruction of events, students learn to shape personal experiences into compelling narratives.
ENG	2016	Writing Speculative Fiction	3	Spring 2020	This creative writing workshop explores craft elements of writing short- and long-form fiction. Reading and writing assignments focus on speculative fiction, including the genres of horror, fantasy, science fiction and historical fiction.
ENG	2017	Writing Detective Fiction	3	Fall 2020	Do you love detective fiction? Have you always wanted to write your own "whodunit?" In this course, you'll read and analyze classic and contemporary detective fiction while working to produce, workshop, and polish your own creative work.
ENG	2018	Nature Writing Workshop	3	Fall 2021	The natural world will be a source for the creative non-fiction, poetry, and fiction pieces students will write in this class. Through readings, field trips, writing exercises, and workshops students will learn to sharpen their language and see more deep
ENG	2019	Writing for Social Change	3	Spring 2021	Can stories change society? In this workshop you will braid your social justice, environmental, healthcare, and migration interests into creative pieces. We will read works by contemporary writers that address existing problems and call for justice, resis
ENG	2020	Journalism	3	Spring 2021	News gathering and news writing; principles, rules and techniques of news, editorials, features.
ENG	2021	Journalism for Co-ops	3	Spring 2021	Journalistic principles and practice for students doing individual co-ops via ENG 2999. Distance learning.
ENG	2022	Nova Meets Literary Belfast	3		You will study contemporary Irish/Northern Irish writers while writing your own creative pieces. Partnering with the Seamus Heaney Center, Belfast, you will meet the writers you have been reading to discuss their work and to workshop your own writing.
ENG	2030	Tutoring Writers	3	Spring 2021	Theory and practice of Writing Center Work; writing, editing and tutoring skills. Permission of instructor required.
ENG	2045	Sp Top in Writing & Rhetoric	3	Spring 2020	Special writing and rhetoric topics selected by the instructor.
ENG	2046	English as a 2nd Language	3	Spring 2020	This service-learning course provides students with the background, tools, and experience needed to teach English to non-native speakers. In addition to classes at Villanova, students practice teaching at a Hispanic culture center.
ENG	2050	Writing for Magazines	3	Spring 2017	The craft of magazine writing. Genres of non-fiction including profile writing, essay writing, travel writing, criticism, and long-form journalism.
ENG	2051	Sports Writing	3		Sports are more than games; they're a crucible for examining human experience. By examining the work of some of the genre's best writers, students will learn to report and write about this arena with deeper understanding and insight.
ENG	2060	Desktop Publishing	3	Fall 2018	Use of software to write editorials, news articles, and press releases, and to design flyers, brochures, and newsletters for community organizations. The basics of web page design.
ENG	2061	Editing & Publishing	3	Fall 2021	Literary publishing in a diverse, compelling field involving both art and commerce. This hands-on class explores the economic, social, and artistic forces that shape contemporary literature. Grapple with what it means to "make culture" while honing editor
ENG	2070	Legal Writing and Analysis	3	Spring 2021	Fundamentals of legal writing and analysis.
ENG	2080	Hist of English Language	3		The development of the English language from Old English to Modern English.
ENG	2250	Ways of Reading:Lit Analysis	3	Fall 2021	An exploration of how we engage, understand, explicate, and enjoy texts of all sorts.
ENG	2300	Women in Literature	3	Fall 2021	Study of the place of women in literature, with emphasis on modern fiction, drama and poetry written in English.
ENG	2301	Science Fiction	3	Spring 2020	Science fiction as a significant genre.
ENG	2302	Apocalyptic Literature	3	Spring 2020	One of the oldest forms of narrative, apocalyptic literature is more popular - and powerful - than ever. Starting with Revelation, this course traces this tradition through fascinating poems, stories, novellas, novels and films to the present day.
ENG	2304	Cont World Lit & Environment	3	Fall 2021	The study of global contemporary fiction, poetry, creative non-fiction, and film that focuses on the environment, climate change, social justice and the future of nature.
ENG	2305	Black Life Writing	3	Spring 2021	Examines major autobiographies by African American and Africans, exploring self, truth, the body politic, and construction of identity. These authors develop crucial dimensions of black intellectual self-representation, whether as individuals or as part o
ENG	2340	Modern Short Story	3	Spring 2017	Contributions to the short story form made by American, Irish, British, and Continental writers.
ENG	2350	Narrative Television	3	Spring 2021	Plot, character, voice, point of view in visual, aural, dramatic, and verbal aspects of serial television. What works similarly or differently in television and prose fiction? In television and film?
ENG	2360	Adaptation:Film as Literature	3	Spring 2021	The relationship between movies and literature dates back to film's earliest days. Comparing films and texts allows for an explanation of storytelling and the fascinating choices auteurs make. Plot, tone, and symbolism are considered alongside questions
ENG	2400	Western World Literature I	3	Fall 2020	Readings in translation of some of the classics of Western literature from the ancient world to the Renaissance, by such writers as Homer, Sophocles, Virgil, Dante, and Cervantes.
ENG	2410	The Art of Translation	3	Spring 2020	Translation is a passport to the world. Explore texts translated from a range of languages into English. Translation theory and experiments in translation will support our reading and writing across boundaries. Fluency in a second language is not required

ENG	2610	Tutorial Readings	3	Spring 2021	Program of approved readings under the supervision of a selected faculty member; examination on readings and a lengthy paper required. Restricted to senior English majors with high cumulative averages. Permission of chair required; ordinarily may not be r
ENG	2790	Topics in Lit. and Culture	3	Spring 2021	Specific topics vary each semester.
ENG	2800	Teaching Practicum	3	Fall 2021	Open only to senior English majors with a GPA of at least 3.5. Permission of consulting teacher and chair required.
ENG	2991	English Majors in Workplace	1	Fall 2021	Communicating and applying skills of English Majors in the workplace.
ENG	2992	English Topics Abroad	1	Spring 2019	Co-requisite 1-credit course designed to provide an embedded study-abroad experience to complement a requisite English course.
ENG	2993	Internship	3	Fall 2021	Internship
ENG	2996	Internship	6	Fall 2021	
ENG	2998	Publishing Co-op	6	Fall 2017	Full-time employment with a selected firm in the area of publishing, where experience is gained through appropriate training, instruction, and supervision. Approval of English Department Chair required.
ENG	2999	Publishing Co-op	9	Fall 2021	Full-time employment with a selected firm in the area of publishing, where experience is gained through appropriate training, instruction, and supervision. Approval of English Department Chair required.
ENG	3000	Intro to OE Lang & Lit	3		Old English literary works in translation and original language.
ENG	3001	Foundational Lit in ENG 1	3	Fall 2021	Influential British literature from beginnings to 1750, tracing key ideas, power relations, and genres that still impact literature in English, and Anglophone culture, today. Relationships between writing and political change, media history, gender, spiri
ENG	3150	Chaucer	3	Fall 2019	The Canterbury Tales, Troilus and Criseyde, and additional works.
ENG	3160	Fabulous Middle Ages	3	Spring 2020	The Middle Ages mixed history (historia) and fable (fabula) freely. This course traces the intersections between the fabulous (the fictional and fantastic) and the "real" in medieval narratives about the history, global travel, and the natural world.
ENG	3170	Love & War in Medieval Romance	3	Spring 2021	Medieval romances - texts about chivalry and love - have shaped everything from racial identity to flirting. This course considers how romances depict sexuality and gender; construct notions of religious otherness; and shape ideas about peoples and politi
ENG	3181	Irish Epics, Visions&Hauntings	3	Fall 2020	A study of Irish literature from its origins in the world of Celtic mythology, epic and saga through the development of Anglo-Irish literature.
ENG	3190	Medieval Brit/Ir Lit. & Cult.	3	Fall 2018	Specific topics vary each semester.
ENG	3250	Shakespeare	3	Fall 2019	This course studies the plays and/or poems of Shakespeare. It may be focused on a particular genre of Shakespeare's work, a period in his career, or a topic. The course seeks to develop students' appreciation of Shakespeare's artistry and relevance.
ENG	3260	Revenge Tragedy	3	Spring 2021	This course studies a popular and influential type of Renaissance drama: the revenge tragedy, a genre preoccupied with spectacular acts of murder and revenge and with the psychological, social, familial, and political circumstances that motivate and justi
ENG	3290	Renaissance Br/Ir Lit. & Cult.	3	Spring 2018	Specific topics vary each semester.
ENG	3350	Milton	3	Fall 2020	English poems and selected prose on issues of gender, politics, religion, culture.
ENG	3440	Harlots, Rakes, & Libertines	3	Spring 2020	Discover the Libertine authors of the seventeenth and eighteenth century, whose witty, scandalous works promoted a freethinking philosophy of sexual pleasure and individual freedom, and provoked critics who blamed them for modern social problems such as p
ENG	3490	18th c. Brit/Ir Lit. & Culture	3	Fall 2018	Specific topics vary each semester.
ENG	3500	Foundational Lit. in English 2	3		Influential British and Irish literature since about 1800 (covering the period after ENG 3001), exploring key ideas, power relations, and genres that still shape literature in English today. Topics include political change, gender, artist and audience, an
ENG	3502	Later Romantic Writers	3	Spring 2018	Byron, Shelley, Keats and other writers of the second half of the Romantic period.
ENG	3507	Lit, Medicine, & Culture	3	Spring 2021	Explore literary responses to pivotal developments in medical science and practice from the eighteenth century to the present. Study works that engage with the new ideas about illness, treatment, and disability that arose alongside changing understandings
ENG	3520	19th Cent British Novel	3	Fall 2019	Selected novelists from Jane Austen to Thomas Hardy.
ENG	3530	Victorian Doubles	3	Fall 2021	Investigate how Victorian literature represents doubles - self and other, women and men, past and present, public and private - and study changing constructions of gender, industrialization, and imperial expansion in nineteenth-century Britain.
ENG	3540	Institutional Fictions	3	Spring 2021	This course examines the intriguing relationship between literature and institutions, including governments, schools and prisons. Reading nineteenth-century literature in relation to our contemporary moment, we focus especially on universities, interrogat
ENG	3580	Topics in 19th C Irish Lit&Cul	3	Fall 2020	Special topic in 19th century Irish literature and culture. For access to the full course description, go to this course number in the Villanova Master Schedule and click on the "syllabus available" link.
ENG	3590	19th c. Brit/Ir Lit. & Culture	3	Fall 2017	Specific topics vary each semester.
ENG	3615	James Joyce	3	Fall 2017	A study of the novels and short stories of James Joyce, with concentration on Ulysses.

ENG	3617	Irish Revivalism	3		Study of Irish Revival of the late-nineteenth and early-twentieth century; focus on revivalism, gender, and colonial politics, reading multiple literary genres, beginning with Jane Wilde and William Butler Yeats.
ENG	3618	Intro to African Lit I	3		Chronological study of forms of cultural and literary production in Africa. Begins from oral epic traditions up to late 20th century written literatures. Examines postcolonial theory and the issues of language and "authenticity" in representations of Africa
ENG	3619	Intro to African Lit II	3		Continuation of study of the various literary practices in Africa, from the late 20th-century writing to 21st-century artists. In addition to postcolonial representation, examines African feminism, Afropolitanism, and Africa and Diaspora intersections
ENG	3621	Contemp British Novel	3	Fall 2020	This course explores British fiction written after the second World War until today. What stories do novelists tell about the meaning of "Britishness" after the British empire? We investigate themes of nostalgia, xenophobia, feminism, and class warfare
ENG	3622	Virginia Woolf	3	Spring 2021	Virginia Woolf, novelist, essayist, and diarist, is one of the most influential 20th-Century Writers. Woolf explores the self, modernity, depression, and the joy of an ardent feminist life. We will read Woolf's novels and contemporary debates about form,
ENG	3640	Irish Drama	3		Irish plays and performances including Abbey Theatre plays by William Butler Yeats, Augusta Gregory, John Millington Synge, and Teresa Deevy, followed by works by Samuel Beckett, Brian Friel, Marina Carr and new Irish theatre.
ENG	3650	African Drama	3		Examination of the aesthetics, politics, and practices of the theatre and drama in Africa. Focused on written plays, course explores drama performances on stage, television, and movies. Introduces students to role-playing and small-scale adaptation of text
ENG	3660	Contemp. Lit & Film of India	3	Spring 2021	India produces some of the most innovative and engrossing literature in the world, while also releasing more films than any other nation. Through both forms, we'll explore debates in contemporary India concerning border tensions, caste, gender, fantasy, a
ENG	3680	Top: 20th-21st C Irish Lit&Cul	3	Spring 2021	Special topic in 20th-21st century Irish literature and culture. For access to the full course description, go to this course number on the Villanova Master Schedule and click on "syllabus available" link.
ENG	3682	Contemporary Irish Literature	3		Readings of Irish poets and prose writers of the last fifty years, starting with Seamus Heaney and Edna O'Brien, and including contemporary works by visiting Irish Heimbald Chairs.
ENG	3690	Br/Ir Lit. & Cult. after 1900	3	Fall 2021	Specific topics vary each semester.
ENG	4000	American Literary Trad 1	3	Fall 2021	By studying Black, Latinx, Native, and white writers from the 1600s through 1900, this course introduces the literary history of what we now call the United States, inviting students to learn from stories and voices typically left out of more official "Am
ENG	4001	Major Amer Writers I	3	Spring 2020	The masterpieces of selected American writers from early times to the Civil War era.
ENG	4003	African-American Lit Trad 1	3	Spring 2020	Black people helped craft the narrative of their lived experiences from their arrival in the New World. Students read the earliest African American literary offerings through the first decade of the twentieth century, including political treatise, autobio
ENG	4040	American Short Story	3	Fall 2017	Development of the short story in America from Washington Irving to the present.
ENG	4500	American Slave Narrative	3	Fall 2019	Slavery as a central paradox of American history and literature with emphasis on race and gender. Readings by Douglass, Brent Stowe, Morrison, and others.
ENG	4502	The Black Atlantic	3	Fall 2021	This interdisciplinary course looks at the history and literature of the transatlantic slave trade, which fundamentally altered Europe, Africa, and the Americas during the early modern era. It also considers the diasporic Black culture that emerged durin
ENG	4515	American Gothic	3	Fall 2020	The nature and evolution of horror writing in America from the eighteenth-century to today.
ENG	4520	American Novel to 1895	3	Fall 2016	The genesis of the American novel.
ENG	4545	Early American Novel	3	Spring 2021	This course survey's groundbreaking U.S. novels from the American Revolution to the Civil War. We'll focus on literary aesthetics as well as how novels affirm or resist prevailing politics, paying particular attention to racism, settler colonialism, capi
ENG	4590	Am. Lit. & Cult. before 1900	3	Spring 2018	Specific topics vary each semester.
ENG	4591	Am. Lit. & Cult. before 1900	3		Specific topics vary each semester.
ENG	4600	Amer Literary Trad 2	3		A survey of American literature from 1900 to the present, meant to give students familiarity with a wide range of authors and genres who have contributed significantly to American writing in the 20th century and beyond.
ENG	4601	Major Ameri Writers II	3		
ENG	4602	African American Lit Trad 2	3		Contemporary African American literature narrates exciting social, political and aesthetic changes in the US. Students will read a variety of literature, including essays, short stories, poetry, novels and plays, beginning with the Harlem Renaissance to t
ENG	4603	African American Short Story	3		African American short fiction has taken on a number of forms throughout the 20th and 21st century. Students will read works by writers diverse as Charles Chesnutt, Zora Neale Hurston, James Baldwin, Alice Walker, Toni Morrison, Octavia Butler and Edwidge

ENG	4605	Amer Poetry: 1900-1950	3	Fall 2017	American poets of the first half of the twentieth Century, including Robinson, Frost, Stevens, Cummings, Williams, Millay, Pound, Eliot, and others.
ENG	4606	Alone Together-Social Dist Lit	3	Spring 2021	How can we feel connected even when alone? This course explores how the activities of reading and writing produce the strange and sustaining feeling of being alone together. We'll examine examples of this paradoxical condition in recent fiction and poetry
ENG	4610	African American Poetry	3		The exquisite poetry of 18th, 19th, 20th and 21st century African American writers, like Wheatley, Dunbar, Johnson, Hughes, Brooks, Sanchez, Giovanni, Angelou, Dove, Rankine and Mullen introduces students to a range of experience and the power of language
ENG	4618	Harlem Renaissance	3		F. Scott Fitzgerald called the years between the wars the "Jazz Age." Folks uptown recognized that a Renaissance was happening in Harlem. Students will study major works by African Americans written during the 1920s and 1930s.
ENG	4622	African American Women Writers	3	Spring 2020	From Phyllis Wheatley to Zora Neale Hurston, Lorraine Hansberry to Alice Walker, Toni Morrison to Chimamanda Adichie, black women writers have helped shape and complicate the contours of the American literary canon. Students read an exciting range of genre
ENG	4623	African American Novel	3		From American slavery to Afrofuturism, writers of the African American novel have explored the lived experience of black people in America and throughout the African Diaspora.
ENG	4632	African American Drama	3		"The play's the thing" to capture the conscience of not only a king but a nation. Students will read plays written by African Americans including Lorraine Hansberry, Amiri Baraka, August Wilson, Anna Deavere Smith, and Suzan Lori Parks.
ENG	4636	Contemp Amer Women's Poetry	3	Fall 2018	The work of American women poets from the last forty years.
ENG	4641	American Immigrant Narratives	3		This course examines the fierce, vibrant strain of writing by immigrants who have pushed beyond boundaries of genre and nation to tell their stories. It focuses on fiction and creative nonfiction published in the U.S. after 1900.
ENG	4645	Post Modern Amer Fiction	3	Spring 2018	Experimental narratives by American writers of the last four decades. Works by Vladimir Nabokov, Thomas Pynchon, Ishmael Reed, Don DeLillo, Joanna Russ, and others.
ENG	4646	Race & Ethnicity: Amer Novel	3	Spring 2021	Canonical texts that treat questions of race and ethnicity. Focus on the critical role of language and literature in constructing and deconstructing racial categories.
ENG	4647	Gender & Sexuality in US Lit	3	Spring 2020	This course examines a fascinating range of contemporary US literary texts to explore the ways that gender and sexuality intersect with race, class and other categories of identity to form our experiences of selfhood, community, national belonging, and power
ENG	4648	U.S. Empire & Cont. Am. Lit.	3	Fall 2020	Examines American literature in the context of U.S. empire, including histories and effects of settler colonialism, overseas expansion, and war. Focuses on authors of color from 1945 to the present.
ENG	4649	Intro to Asian American Lit	3		Examines literature, film art, and other cultural productions by Asian Americans and explores Asian American histories from the early 20th century to the present.
ENG	4651	Lives of the Undocumented	3	Fall 2021	The lived experiences of undocumented immigrants in the U.S. told in their own words through memoir, fiction, poetry, graphic novel, testimony, creative and critical essays.
ENG	4652	Letters, Texts, & Twitter	3	Fall 2020	How does writing bring together distant lovers, friends, family? We'll read letters, the digital forms (social media, instant messaging) that have replaced them, and their representation in novels, poems, and essays to explore how intimacy forms across distance
ENG	4690	Amer. Lit. & Cult. after 1900	3	Spring 2020	Specific topics vary each semester.
ENG	4700	Caribbean Literature	3	Summer 2020	Explores representations of the culture and history of the Caribbean in the literary and performance traditions of creative artists from the region. Examines postcolonial discourse and folklore aesthetics across genres and in cultural forms such as carnival
ENG	4702	Authors On & Off the Page	3	Spring 2021	Do you love to write? Dream of visiting with authors to discuss their work and the publishing world? This course combines creative writing workshops with literary analysis and the chance to hob-nob with prestigious authors during the Villanova Literary Festival
ENG	4703	21st C. American Apocalypse	3	Spring 2021	This course surveys major contemporary novels depicting American disasters and their aftermath. We'll consider the varieties of apocalypse that are imagined -- including economic collapse, pandemic, "zombie apocalypse," and climate disruption -- in relation
ENG	5000	Senior Seminar	3	Fall 2021	Capstone experience combining immersion in primary and secondary materials with an intensive writing experience. Limit of 15 students.
ENT	2020	Intro to Entrepreneurship	3	Fall 2019	Process of starting new business including business models and plans, legal and HR issues, product design, supplier relationships, business growth.
ENT	2021	Entrepreneurship Mkt	3	Fall 2019	Marketing strategies for new ventures including target markets, research, sales strategy, guerrilla marketing, promotion, distribution, pricing.
ENT	2022	Entrepreneurship Fin	3	Spring 2020	Funding strategies and accounting for new ventures including cash management, forecasting, account procedures, inventory models and management, pro forma financial statements, credit policies, taxation, exit options.
ENT	2023	Entrepreneurship Practicum	3	Spring 2017	Develop a business plan, plan for, finance and start an actual business; end business and analyze experience; profits donated to charity of choice.

ENTR	1000	The Basics of Entrepreneurship	3	Summer 2021	This course introduces students to the concept of "entrepreneurship" and gives them an academic framework to understand and analyze the theory and practices of entrepreneurial endeavors. This course draws from many different disciplines and includes topic
ETH	2050	The Good Life:Eth & Cont Prob	3	Fall 2021	Major Western ethical traditions as they apply to selected contemporary ethical problems, with special consideration to Jewish and Christian perspectives.
ETH	3010	Topics in Ethics	3	Fall 2021	Addresses a special topic in ethics of current interest to faculty & students.
ETH	4000	Integrating Seminar	3	Spring 2021	A capstone course which integrates academic work and service pursued for concentration, topics determined by professor and research projects of students.
ETH	4975	Independent Study in Ethics	3	Fall 2021	Topic in Ethics chosen by the student and approved by the professor and the Director of the Ethics Program.
FFS	1111	Introductory French I	4	Fall 2021	Groundwork in French, including oral proficiency, aural comprehension and reading; for students with no prior knowledge of French. Supplementary language laboratory work and oral drills.
FFS	1112	Introductory French II	4	Fall 2021	Groundwork in French, including oral proficiency, aural comprehension and reading; for students with one year of high school French. Supplementary language laboratory work and oral drills. Students should have completed FFS 1111 or equivalent.
FFS	1121	Intermediate French I	3	Fall 2021	Review of grammar, composition, reading and conversation. Students should have completed FFS 1112 or equivalent.
FFS	1122	Intermediate French II	3	Fall 2021	Review of grammar, composition, reading and conversation. Students should have completed FFS 1121 or equivalent.
FFS	1130	Intensive French Language	3	Summer 2017	Regular practice in conversation and composition with review of grammar and continuing work on language skills in French. Offered in Lille through the Villanova-in-Lille program and Intensive Language and Culture Summer Program in Lille and Paris.
FFS	1131	Conversation and Composition I	3	Fall 2021	Regular practice in conversation and composition with review of grammar and continuing work on language skills in French. Students should have completed FFS 1122 or the equivalent.
FFS	1132	Conversation & Composition II	3	Fall 2021	Regular practice in conversation and composition with review of grammar and continuing work on language skills in French. Students should have completed FFS 1131 or the equivalent.
FFS	1134	Business French	3		An introduction to French business terminology and discourse related to economic, finance, and management.
FFS	1138	Advanced Grammar	3	Summer 2019	Intensive practice of spoken and written French.
FFS	1139	Intercultural Comm in French	3	Spring 2020	Offered in Lille through the Villanova-in-Lille program, this course aims to develop students' intercultural sensitivity and competence by helping them to reflect on their experiences as they occur.
FFS	1140	Writing & Stylistics in French	3	Fall 2021	Intensive practice in written expression and textual analysis. Compositions are modeled on selected French texts.
FFS	1151	Intro to Translation of French	3		Introduction to the principles of translation from French to English and from English to French. Prerequisite: FFS 1132 or approval from the FFS coordinator.
FFS	2075	Introduction to French Cinema	3	Summer 2020	Introduction to major works of French cinema from the silent era to the 2000s. Prerequisite: FFS 1132 or authorization from instructor.
FFS	2076	Intro To Francophone Cinema	3		Introduction to major films from various Francophone traditions (Maghreb, Sub-Saharan Africa, Caribbean, Quebec). Prerequisite: FFS 1132 or authorization from instructor.
FFS	2220	Lit and Culture of France	3	Fall 2020	Significant developments in the arts, society, and literature in France from the Middle Ages to the French Revolution. Pre-requisite: FFS 1132 or authorization from instructor.
FFS	2221	Lit/Cult Francophone World	3	Fall 2021	Significant developments in the literatures of the French-speaking world from the 20th century to the present.
FFS	2285	Intro to Comics of French Expr	3	Spring 2021	An overview of the voices, forms and innovations of the comics traditions of France and the French-speaking world. Works studied may include Tintin, Asterix et Obelix, Persepolis, Lapinot, Gaston Lagaffe.
FFS	2993	Service Learning Internship	3	Spring 2021	Translation of documents as part of the CRS Partnership, working on water supply, sanitation, and environmental health issues, within the historical and cultural context of the region. Prerequisites: FFS 1132 or approval from instructor.
FFS	3025	Reading 20th-C Francophone Lit	3	Fall 2018	Regions may include North Africa, the Caribbean Islands and Canada. Pre-requisite: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from instructor.
FFS	3046	Readings 20th C French Lit	3		Analysis of specific trends of 20th-century French literature. Topics may include Surrealism, the New Novel, or Existentialism, among others. Prerequisite: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from instructor.
FFS	3075	Themes in French Cinema	3	Spring 2019	Analysis of films that deal with this topic. Prerequisites: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from instructor.
FFS	3076	Selected Works French Cinema	3	Fall 2020	Analysis of major works of French cinema. The course may be organized around a single director (Renoir, Clouzot, Truffaut, Resnais, Malle etc.) It may also explore a specific movement (poetic realism, the New Wave, or the so-called "cinema du look"). Pr
FFS	3145	The Extreme Contemporary	3	Fall 2021	Analytical readings of major texts published within the past ten years.
FFS	3225	Readings In Maghrebi Lit	3		Analytical readings of major texts of the French-speaking North-African traditions. Prerequisite: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from instructor.
FFS	3226	Readings in Caribbean Lit	3		Analytical readings of major texts of the French-speaking Caribbean traditions. Prerequisite: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from instructor.

FFS	3227	Readings Sub-Saharan Afr Lit	3		Analytical Readings of major texts of the French-speaking Sub-Saharan traditions. Prerequisite: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from instructor.
FFS	3255	Themes in Poetr of Frch Expres	3		An overview of the voices, forms and innovations of the poetic traditions of France and the French-speaking world through the themes of love; subjectivity and objectivity; masculinities and femininities; collective identity formation and affirmation and ot
FFS	3285	Fr Popular Music, 1950-pres	3		Survey of popular music, 1950 to the present, considering literary influences and trends in music and in the industry. Pre-requisites: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from Instructor.
FFS	3287	Cult Studies: France & Maghreb	3		Exploration of the rich inter-cultural connections between France and its former North-African colonies. Prerequisites: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from Instructor.
FFS	3412	Special Topics	3	Fall 2021	Advanced study of topics of special interest in French literary and/or cultural studies. May be repeated for credit if topic changes. Prerequisite: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from Instructor.
FFS	3625	Readings in Medieval&Renai Lit	3		Analytical readings from the Medieval and Renaissance periods. Works studied may include La Chanson de Roland, Tristan et Iseult, fabliaux, Montaigne, Rabelais, Ronsard, Marguerite de Navarre. Pre-requisites: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285
FFS	3725	Readings in 17th C Literature	3		Analytical readings of major texts. Pre-requisites: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from Instructor.
FFS	3765	French Classical Theatre	3		Classical dramaturgy and modern interpretations of Corneille, Moliere and Racine. Pre-requisites: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from Instructor.
FFS	3845	Utopia in 18th-C Fr Lit	3		Emphasis on real and fictional travel accounts as well as works in which homesteading on islands or in isolated natural settings plays an important role. Pre-requisites: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from Instructor.
FFS	3846	The Epistolary Novel	3	Fall 2016	Study of 18th-century literary works in the form of letters Prerequisite: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from Instructor.
FFS	3925	Paris, Capital of the 19th-C	3	Fall 2020	Literary, artistic, political, and social overview of France's capital city following the French revolution. Pre-requisites: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from Instructor.
FFS	3945	Readings in 19th C Prose	3	Fall 2018	Analytical readings of major novels from the 19th century. Prerequisite: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from Instructor.
FFS	3956	Modernism in French Poetry	3		Study of the birth of modernism as seen through French poetry set in its historical and cultural context. Prerequisite: FFS 2220 or FFS 2221 or FFS 2075 or FFS 2285 or authorization from instructor.
FFS	3970	Research Seminar	3		Principles and techniques of literary research. Overview of major French and Francophone authors and representative works. Students should have completed FFS 1132 or the equivalent.
FFS	3971	Directed Research in FFS	1	Fall 2021	Directed semester-long research project that satisfies the College research requirement, taken in conjunction with another upper-level FFS content course. Pre-requisite: FFS 2220, FFS 2221 or FFS 2075, or approval from the FFS coordinator.
FFS	5900	Independent Study	3	Fall 2021	
FIN	2114	Intermediate Corp Finance	3	Fall 2021	Risk and return relationships; valuation models; cost of capital; capital structure; capital budgeting; dividend policy; international financial transactions; financial statement analysis and forecasting; working capital management. Emphasis on computer
FIN	2121	Special Topics in Finance	1	Fall 2021	Special finance topics offered in lecture/seminar format. Permission of Department Chair or Instructor.
FIN	2227	Fixed Inc Markets & Valuation	3	Fall 2021	Overview of fixed income markets and securities traded within those markets; bond valuation; duration and convexity of fixed income securities; asset backed security markets and valuation; credit risk analysis interest rate determination and models; inter
FIN	2230	Risk Mgmt of Fin Institutions	3	Spring 2021	The structure, operation, management, and regulation of commercial banks, savings and loan associations, mutual savings banks, credit unions, insurance companies, finance companies, pension funds, investment companies, and international financial institut
FIN	2323	Equity Markets and Valuation	3	Fall 2021	Risk and return; market efficiency; structure of equity markets; equity trading strategies; financial statement analysis and ratio analysis; financial forecasting; valuation of common stocks using fundamental, relative, and technical analysis; convertible
FIN	2324	Portfolio Management	3	Fall 2021	Advanced investment management with an emphasis on portfolio management; forecasting economic conditions; risk-return characteristics of securities; asset allocation (optimization) techniques; selecting investment goals; evaluating portfolio performance;
FIN	2325	Introduction to Derivatives	3	Fall 2021	Overview of financial and non-financial derivatives including options, forwards, futures and swaps; derivatives valuation; trading strategies; application of derivatives for managing financial risks. Prerequisite senior standing.
FIN	2326	Mkt.Struct., Trading&Liquidity	3	Fall 2021	Liquidity, market structure, and trading in financial markets; alternative market structures and their economic and operational underpinnings; tactical trading decisions within different market structures using simulation software and real-time data serv

FIN	2330	Corporate Restructuring	3	Fall 2021	Acquisition process and other methods of corporate restructuring. Advantages of internal and external expansion; types of combinations; requisite financial analysis; negotiation strategies; tax options; the role of government. Benefits and limitations o
FIN	2333	Financial Modeling & Valuation	3	Fall 2021	Financial modeling; valuation methods; investment banking process; discounted cash flow models; comparable firms; precedent transactions; leveraged buyout model; mergers & acquisitions; restructurings. Emphasis on computer applications.
FIN	2335	Intl Financial Management	3	Fall 2021	Foreign exchange markets, foreign derivatives markets, external currency market and their instruments, international parity conditions, foreign exchange risk management, foreign investment analysis, political risk assessment, financing foreign trade, mana
FIN	2340	Contemporary Topics in Finance	3	Spring 2021	Contemporary issues and topics in Financial Management, Financial Markets, Investments, or International Finance.
FIN	2342	Student-Managed Funds I	3	Spring 2021	Management of real-dollar portfolios using various investment styles; business cycle analysis; industry analysis; investment objective screening; security analysis; portfolio analysis, compliance; portfolio reporting. Approval of Finance Department Chair
FIN	2343	Student-Managed Funds II	3	Fall 2021	Continuation of FIN 2342.
FIN	2350	Real Estate Capital Markets	3	Spring 2021	Public real estate debt and equity markets. Mortgage Backed Securities, Commercial Mortgage Backed securities, Collateralized Mortgage Obligations, Prepayment Modeling, Real Estate Equity Valuation.
FIN	3350	Finance Internship	3	Fall 2021	Employment with an approved firm in the area of Finance where experience is gained with appropriate training, instruction, and supervision. Course does not fulfill the requirements for major. Prerequisites: junior or senior standing, a minimum GPA of 2.
FIN	3360	Independent Study - Finance	3	Fall 2021	Independent study under a faculty member's guidance in an area of special interest to the student. The area of interest must be discussed with the faculty member prior to registration. Course does not fulfill the requirements for major. Prerequisites:
FIN	3470	Finance Co-Op	6	Fall 2021	Full-time employment with an approved firm in the area of Finance where experience is gained through appropriate training, instruction, and supervision. Course does not fulfill the requirements of the major. Prerequisite: Finance major with junior statu
GEV	0010	Freshmen Peer Mentoring	0.5	Fall 2021	Peering-mentoring for Freshmen Environmental Science, Environmental Studies, and Geography Majors.
GEV	0020	Sophomore Peer Mentoring	0.5		Peer-mentoring for Sophomore Environmental Science, Environmental Studies, and Geography Majors.
GEV	1002	Geo. of a Globalizing World	3	Fall 2021	The human and physical realms of Geography. Focus on current geographic problems facing specific regions of the world.
GEV	1003	Geo. of Earth's Environments	3	Fall 2021	World climates, water, landforms, soil, and vegetation form the basis of this global environmental approach.
GEV	1004	Climate Change	3	Fall 2021	Spatial patterns of global and regional climate systems. Natural and anthropogenic factors that cause climate change. Understanding human-climate system interaction.
GEV	1005	Geospatial Analysis & Society	3		Use of geospatial technologies to analyze, solve, and understand modern social and environmental issues involving population, development, and urbanization trends around the world.
GEV	1050	Environmental Science I	4	Fall 2021	Multidisciplinary foundation in Environmental Science; first of two semester course. Science course linking environmental biology, chemistry, earth sciences, and climate change. Collection of data from lab experiments and field-based observations.
GEV	1051	Environmental Science II	4	Spring 2021	Second of two course sequence. Multidisciplinary foundation in Environmental Science: natural resources, pollution, & energy, with related field trips & laboratory sessions.
GEV	1052	Environmental Studies	3	Fall 2021	Free elective course to provide Advanced Placement credit for Environmental Science. Pre-requisite: Score of 4 or 5 on AP Environmental Science Test.
GEV	1053	Environmental Studies II	3	Spring 2021	Overview of fundamental environmental topics, including themes in energy, pollution, and resources.
GEV	1750	Geo-Techniques	4	Fall 2021	Principles and applications of geographic technologies and field techniques with emphasis on: field surveys, cartography, global positioning systems, aerial photography, satellite imagery & remote sensing, computer-aided cartography, digital elevation mod
GEV	1903	Internship Elective	3	Summer 2021	
GEV	1906	Internship Elective	6	Summer 2021	
GEV	1909	Internship Elective	9	Spring 2020	
GEV	2001	Prof Dev in Geo and Env	1	Fall 2021	Professional development in the fields of geography, environmental studies, and environmental science.
GEV	2310	Environmental Chemistry	4	Spring 2021	Interdisciplinary approach to chemical and biochemical phenomena. Sources, reactions, transport, effects, and fates of chemical species in the air, soil, and water environments, and their effect on human activity.
GEV	2500	Global Change in Local Places	3	Fall 2021	Geographic research methods to address spatial implications of current local issues. Relationships between global environmental & societal processes & local landscapes. Collection, evaluation, analysis & presentation of qualitative & quantitative geograph
GEV	2510	Political Geography	3		Spatial attributes of political process and structure, with an emphasis on current geo-political issues in the world.

GEV	2525	Population Geography	3	Fall 2021	Geographic dimensions of global population trends, emphasizing global demographic divides. Considers population processes (mortality, fertility, migration), population structures (age, gender, ethnicity), and population policy. Special topics may include
GEV	2893	Independent Study	3	Spring 2021	Independent study under the direction of faculty member of selected topics in geography, environmental studies, and environmental science. Instructor Permission Required
GEV	2993	Internship	3	Fall 2021	
GEV	2996	Internship	6	Fall 2021	
GEV	3000	Special Topics	3	Fall 2021	Contemporary topics in Geography and Environmental Science. Topics will be announced on a semester-by-semester basis. Specific information will be available on the department's web page.
GEV	3001	Intro to Sustainability Study	3	Fall 2021	Development that meets the needs of the present without compromising the needs of future generations. Social, engineering, and economic dimensions, which make up the sustainability model.
GEV	3002	Ecosystem Services	3	Spring 2017	Four major categories of ecosystem services: provisioning services, regulating services, cultural, and supporting services.
GEV	3003	Environmental Geology	3		Application of the principles of geology in the solving of environmental problems.
GEV	3004	Geographies Envrnl Justice	3	Spring 2021	Patterns of environmental inequality that affect health and quality of life. Relationship between environmental harms and benefits and different groups in society. Case studies explore fundamental aspects of environmental justice.
GEV	3300	Stats. in Environmental Sci.	3	Spring 2021	Statistical methods and application. An introduction to statistical concepts, techniques, and applications to data analysis and to problems in the design, analysis, and interpretation of experiments in the environmental sciences.
GEV	3301	Fisheries	3		Current practices and the environmental, political and social implications of this global industry.
GEV	3302	Agricultural Science	3		Environmental implications of agriculture, incl. a scientific analysis of soil, pesticides, fertilizer, and biodiversity.
GEV	3303	Soil Science	3		Soil, soil properties, and biota in various ecosystems with a focus on human impacts to soil mesocosm.
GEV	3304	Air Pollution	3		Analysis of natural and human-caused environmental impacts to the atmosphere.
GEV	3305	Energy Systems	3		Assessment of current methods for supplying energy, incl. fossil fuels, nuclear energy, and renewable energy.
GEV	3306	Alternative Engery	3		Analysis of emerging and established alternative energies, incl. wind, solar, biofuel, and hydropower.
GEV	3308	Environmental Health	3	Spring 2020	Health issues, scientific understanding of causes, and possible future approaches to control of the major environmental health problems in industrialized and developing countries.
GEV	3309	Coral Reefs	3		Overview of the science, policy, and management issues for coral reef ecosystems in a changing world.
GEV	3310	Special Topics in Geology	3		Topical approach to geology to include the terroir of wines, to the geology behind current events.
GEV	3395	Int'l. Studies in Env. Sci.	3		Lecture course taken through the International Studies Program.
GEV	3500	Geography of North America	3	Fall 2020	Physical and human geography of North America from a regional perspective. Key geographic concepts of site, situation, and the interaction between society and the environment for each region.
GEV	3501	Geomorphic Environments	3		Landform processes and development. Geomorphic processes, dynamics, and equilibrium systems. Data collection, statistical analysis, and interpretation of landform development models.
GEV	3503	Earth's Weather Systems	3	Spring 2018	Sciences of the atmosphere: meteorology and climatology. Atmospheric composition and structure, clouds, precipitation atmospheric motion and winds, organized weather systems, air masses, fronts, tropical storms, and severe weather.
GEV	3510	Geo of Europe & the Euro Union	3		Multifaceted geography of Europe: focus on physical, cultural, social, demographic, political, urban, and industrial patterns. Special dynamics of the European Union.
GEV	3521	GIS for Urban Sustainability	3	Fall 2020	Review and analyze sustainability issues faced by cities. Learn GIS applications related to urban sustainability
GEV	3522	Geography of the Middle East	3	Spring 2021	Survey of the region's geography including its physical geography, environmental issues, urban-economic development, cultural geograpy, historical evolution, and the spatial patterns of its human landscapes. Special emphasis placed on its strategic impor
GEV	3525	Geography of Asia	3		Introduction to the rich variety of peoples, cultural traditions, rapid economic development, and environment in Asia.
GEV	3550	Natural Hazards	3	Spring 2021	Processes determining physical risk, societal vulnerability, and response to major hazards including: blizzards, tornadoes, hurricanes, drought, flooding, earthquakes, volcanoes, landslides, avalanches, and wildfires.
GEV	3570	Land Use Planning & Mgmt	3	Spring 2020	Land use planning and management with focus on land-law interfaces between the physical, cultural, and legal realms. Survey of natural and political systems as the basis for land use controls at the federal and regional levels. The environmental, economic
GEV	3580	Natural Res and Conservation	3	Fall 2021	Assessment of natural resource and conservation issues in the U.S. and around the world. Distribution and use patterns of air, water, mineral, energy, and biologic resources. Examination of exploitation, conservation, and preservation management strategie
GEV	3590	Topical Research Problems	3	Fall 2021	Individual projects or studies in geography and the environment.

GEV	3595	Int'l. Studies in Geography	3		Lecture course taken through the International Studies Program.
GEV	3750	Remote Sensing	3	Fall 2021	Data collection and analysis with high-technology platforms such as conventional and color infrared photography, multi- spectral scanners, satellite imagery, thermal infrared, LIDAR, and radar. Application of remotely sensed data to solve complex, human,
GEV	4001	Advanced Sustainability Study	4	Spring 2021	Second in a two-course sequence. An in-depth exploration of the social, engineering, and economic dimensions of sustainability through field trips, guest lectures, and service learning.
GEV	4300	Selected Topics	1	Fall 2021	Selected topics of interest in environmental science and geography. Offered on three or four Saturday mornings or on weekday evenings. Topics will be announced on a semester-by-semester basis.
GEV	4310	Environmental Issues Seminar	3	Spring 2021	Interdisciplinary coverage of current global environmental issues, emphasizing their complexity, analyses, and solutions.
GEV	4320	Spec. Topics in Env Lab Sci	4	Spring 2021	Advanced laboratory science topics in the Environment presented by senior faculty. Specific subject matter will vary with the expertise of the professor.
GEV	4321	Microbial Processes	4		Examination of Earth's dynamic systems and the environmental consequences of environmental processes.
GEV	4322	Ocean Environments	4	Fall 2017	Investigation of the biological, geological, chemical, and physical characteristics of the ocean.
GEV	4323	Watershed Biogeochemistry	4	Fall 2021	Biogeochemical and physical characteristics of watersheds and the threats they currently face.
GEV	4324	Wetland Science and Management	4		Wetland flora and fauna, hydrology, soils and ecology.
GEV	4325	Environmental Ecology	4	Fall 2018	Principles of ecology and their implications for analyzing environmental problems. Understanding processes controlling the dynamics of populations, communities, and ecosystems.
GEV	4326	Environmental Geology	4	Spring 2020	Geologic processes, formation of fossil fuel and ore deposits, and the environmental impact of their extraction.
GEV	4327	Process Geomorphology	4		Processes that shape landforms. Major components of geomorphology, including fluvial, glacial, periglacial, aeolian, slope, and weathering process.
GEV	4328	Climatology	4		Approaches to understand and identify recent and long-term climate behavior in different parts of the world. Basic meteorological factors that influence climate. General climate classification schemes, theories of climate cycles and climate change.
GEV	4329	Global Change Research	4		Advanced field and laboratory research focused on contemporary issues in environmental science.
GEV	4330	Spec Topics in Environm Policy	3	Fall 2020	Advanced topics in environmental policy and management presented by senior and visiting faculty. Specific subject matter will vary with the expertise of the visiting professor or senior faculty member conducting the course. Course may be taken under multi
GEV	4331	Env. Policy & Management	3	Fall 2021	National and international debates of key environmental issues from policy and management perspectives.
GEV	4332	Water Resources Planning	3		Management and planning of natural and constructed water systems.
GEV	4333	Politics and the Env.	3	Fall 2019	Analysis of current affairs related to the environment.
GEV	4334	Environmental Law	3		Legal analysis of the environment, incl. seminal national and international laws.
GEV	4335	Energy Policy	3		Policies pertaining to the extraction, supply, distribution, and use of energy.
GEV	4336	Environmental Economics	3	Fall 2021	Application of economic principles to study environmental issues, such as evaluating the monetary value of ecosystems, the effectiveness of environmental policies, and comparing costs and benefits of different policy options. Contemporary environmental ec
GEV	4340	Spec Topics in Environm Issues	3	Spring 2017	Advanced topics in environmental social science and humanities presented by senior and visiting faculty. Specific subject matter will vary with the expertise of the visiting professor or senior faculty member conducting the course.
GEV	4351	Oceanography	3	Summer 2020	Biology, geology, chemistry, and physical environment of the ocean.
GEV	4352	Physical Geology	3		Earth's dynamic systems and the environmental consequences of geologic processes.
GEV	4353	Green Science	3		Application of eco-friendly thinking to scientific disciplines. Scientific solutions to global warming, pollution and other impacts on nature and the planet.
GEV	4354	Biomimicry	3		Design and production of materials, structures, and systems that are modeled on biological entities and processes.
GEV	4355	Tropical Ecology	3		Environmental issues unique to tropical latitudes and ecosystems.
GEV	4356	Global Change Science	3		Advanced exploration and discussion focused on contemporary issues in environmental science.
GEV	4360	Field Methods in Env Science	4	Spring 2018	Environmental field research focusing on a specific environmental issue including an extensive field trip.
GEV	4361	Field Research	4		Design and conduct environmental research during a 1-2 week field trip to various locations; Lectures will incl. natural history, ecology, and geology of the location.
GEV	4511	Climate Variability	3	Spring 2021	Seasonal, interannual, and decadal variations in climate variables. Atmospheric circulation patterns, teleconnections, and their impacts on the environment and society.
GEV	4512	Medical Geography	3	Fall 2021	Spatial patterns and epidemiology of disease. Characteristics of epidemics and pandemics from a geographic perspective. Case studies, spatial/statistical analyses, and transmission processes.
GEV	4513	Geography of National Security	3		Geography of the national security landscape and the nexus of geography and conflict. Modern trends in national security, historical case studies, and geospatial analysis.

GEV	4514	Geomorphology	3	Spring 2021	Processes that shape the natural landscape. Descriptive and quantitative techniques to examine balance between tectonic activity and subsequent modification of landforms by weathering, erosion and deposition.
GEV	4515	Terrestrial Ecosystems	3		Spatial distribution of species, biomes, and ecosystems at local, regional, and global scales. Ecological and historical processes responsible for geographic patterns of biodiversity
GEV	4516	Environmental Security	3		Broad range of security issues triggered by demographic and environmental factors such as competition for resources, population growth/displacement, disease, natural disasters, environmental change, and non-sustainable practices.
GEV	4517	Sustainable Development	3		Environmental, economic, and justice issues facing developing countries. Historical review of post-colonial experiences and the impact of modern global economic and environmental changes on the political, economic, and demographic experiences of Latin Am
GEV	4518	COVID-19 Pandemic	3	Summer 2021	Overview of the COVID-19 pandemic including issues around global health, disease diffusion, health disparities, vulnerable populations, social determinants of disease, and economic and political implications.
GEV	4550	Geographical Issues Seminar	3		Interdisciplinary coverage of contemporary global human and environmental issues, emphasizing their complexity, analyses, and solutions.
GEV	4700	Geographic Information Systems	4	Fall 2021	Principles, techniques, and applications of Geographic Information Systems (GIS). Laboratory employs analyses with state-of-the-art GIS software.
GEV	4710	Adv. Geographic Info Sys	4		Spatial problem solving by focusing on theoretical/conceptual and practical aspects of GIS modeling and spatial analysis.
GEV	6005	Senior Research Seminar	1	Fall 2021	Scheduled group meetings with other research students in the department, focusing on general and specific aspects of the senior research project/thesis. Requires permission of instructor.
GEV	6006	Research Colloquium		Fall 2021	Presentations by speakers including faculty, students, and guests from the academic, public, and private sectors. Lectures feature new creative and scholarly work that encompasses the disciplines and areas of interest of the department.
GEV	6200	Independent Study	3	Fall 2021	Individual projects or studies in geography & the environment.
GEV	6210	Senior Thesis Research I	3	Fall 2021	Research with faculty member selected by student. Part 1 of two-semester sequence. Continues as Thesis Research II, which culminates in a written thesis. Requires permission of the faculty mentor.
GEV	6220	Senior Thesis Research II	3	Spring 2021	Second phase of senior thesis sequence. Research with faculty mentor selected by student. Culminates in a written senior thesis. Requires permission of the faculty mentor.
GIS	2000	Intro to Global Interd Studies	3	Fall 2021	Gateway course to Global Interdisciplinary Studies, preparing for area studies specializations and GIS interdisciplinary programs. Focuses critical thinking skills through the comparative lens of both global and interdisciplinary analyses. Mandatory prepa
GIS	2993	Global Studies Internship	3	Fall 2021	Permission of Chairperson required.
GIS	2996	Global Studies Internship	6	Spring 2020	Permission of Chairperson required.
GIS	3000	Special Topics Study Abroad	3		Special topics in global and interdisciplinary studies taken while studying abroad.
GIS	3992	Global Topics Abroad	1		Co-requisite 1-credit course designed to provide an embedded study-abroad experience to complement a requisite GIS course.
GIS	4100	Topics in GIS	3	Spring 2018	Specific topics in global interdisciplinary studies that vary each semester.
GIS	4281	The Tale of Shanghai and Tokyo	3	Fall 2017	Struggling with their identity while being nurtured by their traditional culture for more than a century, today's Shanghai and Tokyo eventually emerged from a feudal society as modern, sophisticated, and diversified metropolises on the global stage. Explo
GIS	4282	Race & Social Structure:Brazil	3	Fall 2017	Interdisciplinary, team taught course which will explore the race and social structure of Brazil in through a comparative perspective.
GIS	4283	Global Tea Culture	3	Spring 2017	Interdisciplinary, team taught course which will explore the history and influence of tea in various cultures of the world through a comparative perspective.
GIS	4284	Glob. Racial Images Film & Lit	3	Summer 2017	An examination of the globalization of racial images through a comparative study of film and literature, using historical inquiry and literacy criticism. Topics include institutional and intellectual racism, imperialism and segregation, racial violence, m
GIS	4285	GIS Special Topics	3		Interdisciplinary study of topics of special interest in Global Interdisciplinary Studies related to course(s) taken through the International Studies Program. May be repeated for credit if topic changes.
GIS	4286	Bridging Global Cult Conflict	3	Fall 2016	Interdisciplinary, team taught course which will explore culturally global based conflicts with social, political, economic elements through a comparative perspective. This is a team taught course and will be capped at maximum student enrollment of 17 stu
GIS	4290	African & Caribbean Pol & Lit	3	Spring 2018	Interdisciplinary exploration of diverse literary traditions of Africa and its large diaspora in the Caribbean through political science and development economics theories. Examines political dysfunctions that follow postcolonialism; offers theoretical an
GIS	5000	Special Topics	1	Spring 2021	Intensive seminar taught by distinguished visiting faculty on a topic of global and interdisciplinary significance.
GIS	5011	GIS Select	3	Fall 2021	Interdisciplinary team-taught courses offered by GIS to fulfill requirements for the Junior Research Seminar and additional GIS Select course. May be taken by GIS majors in any of the specializations, including Gender and Women's Studies and Peace and Jus

GIS	5012	GIS Select	3	Interdisciplinary team-taught courses offered by GIS to fulfill requirements for the Junior Research Seminar and additional GIS Select course. May be taken by GIS majors in any of the specializations, including Gender and Women's Studies and Peace and Jus
GIS	5021	GIS Select	3	Interdisciplinary team-taught courses offered by GIS to fulfill requirements for the Junior Research Seminar and additional GIS Select course. May be taken by GIS majors in any of the specializations, including Gender and Women's Studies and Peace and Jus
GIS	5022	GIS Select	3	Interdisciplinary team-taught courses offered by GIS to fulfill requirements for the Junior Research Seminar and additional GIS Select course. May be taken by GIS majors in any of the specializations, including Gender and Women's Studies and Peace and Jus
GIS	5031	GIS Select	3	Interdisciplinary team-taught courses offered by GIS to fulfill requirements for the Junior Research Seminar and additional GIS Select course. May be taken by GIS majors in any of the specializations, including Gender and Women's Studies and Peace and Jus
GIS	5032	GIS Select	3	Interdisciplinary team-taught courses offered by GIS to fulfill requirements for the Junior Research Seminar and additional GIS Select course. May be taken by GIS majors in any of the specializations, including Gender and Women's Studies and Peace and Jus
GIS	6000	Independent Study	3 Fall 2021	Individual students with specific interests will work on a supervised project.
GIS	6500	Capstone I: Research	3 Fall 2021	Team-taught, interdisciplinary seminar. Integration of work for GIS major, leading to the research & writing of the major thesis, topic determined by faculty of record. Senior standing.
GIS	6600	Capstone 2:Thesis	3 Spring 2021	Directed research seminar focusing on the writing of the major theseis. Senior standing.
GRK	1051	New Testament Greek I	5	Essentials of the grammar, syntax and vocabulary of the Greek of the New Testament. Reading and writing of simple New Testament Greek.
GRK	1052	New Testament Greek II	5	Essentials of the grammar, syntax and vocabulary of the Greek of the New Testament. Reading and writing of simple New Testament Greek.
GRK	1111	Introductory Ancient Greek I	4 Fall 2021	The basic forms, syntax and vocabulary of Ancient Attic Greek; selected prose in second semester.
GRK	1112	Introductory Ancient Greek II	4 Spring 2021	The basic forms, syntax and vocabulary of Ancient Attic Greek, selected prose in second semester.
GRK	1113	Intensive Intro. Ancient Greek	3	Intensive one-semester course covering all basic skills (grammar, morphology, vocabulary) needed to translate Ancient Greek. Graduate Students (or Undergraduates with permission of Classical Studies' Department Chair).
GRK	1121	Intermediate Ancient Greek I	3 Fall 2021	Having reviewed the primary grammar and syntax of Attic Greek, this course will examine selections from several principal prose authors of the classical period (e.g. Herodotus, Plato, Thucydides, et al).
GRK	2001	Readings in Ancient Greek	1 Fall 2021	Selected readings in ancient Greek with a focus on building and strengthening translation skills.
GRK	3001	Readings in Authors	3 Spring 2018	Selected readings from a variety of Greek authors. Fulfills advanced literature requirements.
GRK	4450	Greek Philosophers	3	Greek philosophical thought and its vehicle, the Greek language, based on the reading of texts in the original.
GRK	5850	Greek Tragedy	3	Selected plays, read and interpreted in the light of contemporary Greek institutions and thought, with attention to their poetic and dramatic structure.
GRK	5900	Greek: Independent Study	3 Spring 2021	Supervised study, activity or research. May be taken more than once. Prior approval of chair and instructor.
GRK	5950	Greek Comedy	3	Selected plays, read and interpreted in the light of contemporary Greek institutions and thought, with special attention to their poetic and dramatic structure.
GRK	6001	Senior Greek Capston	3	A reading, research, and conference course on selected topics of Greek literature and history; introduction to research in classical studies.
GWS	2050	Introduction to Gender Studies	3 Fall 2021	The history and evolution of feminist analysis as a force of history, theory, art, and culture. Critical distinctions between the biology of sex and the social construction of gender. Basic principles of feminist thought, from its origins in the Women's M
GWS	2993	GWS Internship	3 Fall 2021	Internship.
GWS	3000	Independent Study	3 Fall 2021	Approval of Gender and Women's Studies Director required.
GWS	5000	Integrating Seminar	3 Spring 2021	An interdisciplinary course that focuses on a topic through methodology that requires Gender and Women's Studies minors to provide input from the research areas of their majors. Approval of Director of Gender and Women's Studies required.
HBW	1112	Intro. to Modern Hebrew II	6	Functional use of Hebrew for students with no prior knowledge of Hebrew. Communication skills (speaking and listening), reading and writing skills.
HIN	1111	Intro to Hindustani I	6	Functional use of Hindustani for students with no prior knowledge of Hindustani. Communication skills (speaking and listening), reading and writing skills.
HIN	1112	Intro to Hindustani II	6	Functional use of Hindustani for students with no prior knowledge of Hindustani. Communication skills (speaking and listening), reading and writing skills.
HIS	1002	The United States to 1877	3 Fall 2016	For AP and transfer credit only. Does not fulfill Arts and Sciences core history requirement.
HIS	1003	The United States Since 1877	3	For AP and transfer credit only. Does not fulfill Arts and Sciences core history requirement.
HIS	1060	Topics in Religion & Society	3 Fall 2021	Selected core courses exploring religion in different eras with emphasis on cross cultural interaction.
HIS	1065	Topics Nature, Environ & Tech	3 Fall 2021	Selected core courses exploring relationship between enviornmental and technological change in different eras and societies.

HIS	1070	Topics Empire and Imperialism	3	Fall 2021	Selected core courses on empire and practice of imperialism in different eras.
HIS	1075	Topics in Race & Gender	3	Fall 2021	Selected core courses exploring issues of race and/or gender in different eras.
HIS	1150	Topics in Atlantic World	3	Fall 2021	Selected core courses on political, social, and cultural interaction in the Atlantic basin beginning in the 15th century.
HIS	1155	Topics in America & the World	3	Fall 2021	Selected core courses offering transnational perspectives on the development of American society.
HIS	1160	Topics in Asia & Pacific	3		Selected core courses on political, social, and cultural interaction among different societies in Asia and Pacific basin.
HIS	1165	Topics Global Perspectives	3	Fall 2021	Selected core courses that take a global or comparative approach to major issues.
HIS	1250	Top in Ancient Civilizations	3	Fall 2021	Selected core courses on different aspects of ancient societies.
HIS	1903	Internship Elective	3	Fall 2021	
HIS	1906	Internship Elective	6	Fall 2016	
HIS	2000	Investigating U.S. History I	3	Fall 2021	In-depth study of American history from the pre-Columbian period to the Civil War and Reconstruction, with a particular emphasis on engaging historical problems as a process of inquiry and interpretation. Designed especially for history majors and future
HIS	2001	Investigating US History II	3	Spring 2021	In-depth study of American history from the end of Reconstruction to the present, with a particular emphasis on engaging historical problems as a process of inquiry and interpretation. Designed especially for history majors and future teachers, but open
HIS	2151	Colonial America	3	Spring 2019	The political, economic, social, and intellectual life of the American colonies and the clash of racial and ethnic groups in America to 1763.
HIS	2161	Revolutionary & Fed Amer	3	Spring 2020	The colonial resistance to Great Britain; the making of the Constitution; and the continuing struggle, to 1810, to define the meaning of the Revolution.
HIS	2171	Building a Nation 1800-50	3	Fall 2018	The development of the Republic from the presidency of Jefferson through the Mexican War; revolutions in transportation and commerce, struggles of nationalism and sectionalism; issues of race and gender and the ferment of reform.
HIS	2181	Civil War & Reconstruct	3	Fall 2020	A study of the causes of a war in which Americans fought Americans; the war's evolving nature and eventual outcome; the fight over the meaning and the extent of reconstruction; and the long term political, economic, and social consequences of the war and
HIS	2201	United States 1914-1945	3	Fall 2020	Major problems and domestic developments in the United States in World War I, the 1920s, the Great Depression and World War II.
HIS	2202	United States since 1945	3	Spring 2021	Major problems and domestic developments in the United States since 1945: reconversion, Cold War, the "Good Society" of the 1950s, turmoil of the 1960s, Vietnam War and its aftermath, contemporary challenges and problems.
HIS	2252	U.S. For Rel 1914 - Present	3	Fall 2019	Diplomatic history from World War I to the present, including involvement in European and Asian struggles, cooperation in international organizations.
HIS	2265	American Military History	3	Fall 2021	The wars of America from their European antecedents to 1900; relations between the military and society; role of the military in national development.
HIS	2274	History of American Medicine	3	Fall 2021	The evolution of American Medicine from the colonial period to the present day. Topics include the rise and fall of heroic medicine, the demise of scientific medicine, the growth of modern surgery, the evolution of medical practice.
HIS	2276	American Environmental Hist	3	Fall 2017	Social, cultural and economic forces that reshaped the American landscape from the colonial era to the present; the place of nature in American thought and society; and the evolution of environmental politics in the 20th century.
HIS	2278	Native American History	3	Fall 2018	Study of American Indians from pre-Columbian times to the present, including land use practices, social customs, gender relations, U.S. government removal and assimilation policies, post-colonial political economy, and contemporary issues of cultural iden
HIS	2286	Irish-American Saga	3	Spring 2021	Pre-famine Irish emigration to North America; the famine; post-famine movement; Irish-American labor, politics, urban and suburban developments.
HIS	2291	African Amer His during Slaver	3	Fall 2020	The forced migrations of Africans to the New World, the institution of slavery, and the struggle of Afro-Americans to gain equality in American society.
HIS	2292	African Amer His since Emancip	3	Spring 2019	Themes of resistance and creativity with the development of the African-American communities in the era following the Civil War. Reconstruction, Northern migration, Jim Crow and segregation, and protest thought and Civil Rights.
HIS	2294	His of Childhood in US	3	Spring 2020	The experience of childhood in America, including topics such as the invention of adolescence; child abuse and protection; child labor; compulsory schooling and immigrant assimilation; juvenile delinquency; age of consent; dating; children in the movies;
HIS	2296	History of American Women	3	Fall 2020	The study of the influence of region, race, and ethnicity on gender definitions in America; and the impact of those ideas in shaping women's lives, sexuality, housework and wage labor, and access to power and politics, from the colonial period to the pres
HIS	2309	Artifacts in History	3	Spring 2018	Cultural history as revealed through artifacts, including everyday objects, decorative arts, and architecture; issues and controversies related to museum exhibits; the role of the Internet in material culture studies.
HIS	2993	Hist Internship	3	Fall 2021	An internship in a local historical archive, museum, park, or library.
HIS	2996	Hist Internship	6	Summer 2021	A more extensive internship in a local historical archive, museum, park, or library.
HIS	2998	Topics in American History	3	Spring 2020	Selected topics in American history of interest to faculty and students.

HIS	3006	Medieval Europe 500-1500	3	Spring 2021	The evolution of the European West from its classical origins. The influence of Christianity upon the development of European institutions and culture. Relations and mutual influences of the European West with its neighbors, the new world of Islam in th
HIS	3011	Greek Civilization	3	Fall 2020	The rise of Greek civilization from Mycenaean times to the Macedonian conquest of Greece by the father of Alexander the Great: Homer, the emergence of the polis, the Persian and Peloponnesian wars, and the flowering of Greek culture at Athens during the
HIS	3014	Medit Wrlld Alexander to Caesar	3	Spring 2021	The interaction of cultural forces between the conquests of Alexander the Great and the consolidation of Roman rule under Caesar; Hellenistic civilization, the rise of Rome in Italy, Rome and the Greek world, and the fall of the Roman Republic.
HIS	3017	The Roman Empire	3	Spring 2020	The achievement of the Pax Romana from the reforms of Augustus to the break-up of the western Empire in the fifth century A.D. Topics treated include life in the provinces, the romanization of indigenous peoples, the legions and society, culture and deca
HIS	3095	Topics in Ancient History	3	Fall 2021	Selected topics in Ancient history of interest to faculty and students.
HIS	3142	The Enlightenment	3	Spring 2019	The cultural transition of traditional Western Christendom to modernity in the 18th Century, including its clash with religion; emphasis on scepticism and empiricism; rehabilitation of natural desires and emotion; efforts to re-engineer human society; new
HIS	3161	20th Century Europe	3	Spring 2019	Social, political, and cultural history of Europe from the fin de siecle to European unification; world wars and revolution, East-West divide, consumer society and popular protest.
HIS	3171	Europe since 1945	3	Spring 2017	Europe from the end of World War II to the European Union; postwar reconstruction; Cold War; the growth of consumer society; the collapse of the Soviet Empire; changing conceptions of European identity.
HIS	3200	Medieval Britain and Ireland	3	Fall 2018	The debts England owes to the Celtic, particularly the Irish, world; changed relations, from fruitful cultural exchange to antagonism, after the Norman Conquest of England. Irish missionary and educational importance; relations between Celtic peoples; wh
HIS	3202	Britain 1660-1815	3	Spring 2020	Emergence of Britain as the preeminent global capitalist economy and political power from the glittering court of Charles II to Britain's loss of its American colonies and its victory over revolutionary France. Connections between political-economic deve
HIS	3216	Ireland since 1800	3	Fall 2020	The social and political history of the Irish state in the 19th and 20th centuries.
HIS	3218	Topics in Irish History	3		Exploration of emerging topics in field of Irish History, including but not limited to the Act of Union, the impact of the Protestant Ascendancy, and the cultural, social and political history of the modern Irish state.
HIS	3233	Hitler and Nazi Germany	3	Fall 2021	Germany from the rise of Hitler to the end of the Second World War.
HIS	3241	Revolutionary Russia 1861-1939	3	Spring 2020	Major political, economic and social changes in the Russian Empire from the war against Napoleon to World War I; reform from above and revolution from below; Russia's industrial revolution; social and cultural modernization; the institution of monarchy u
HIS	3242	Russia from Stalin to Putin	3	Spring 2019	Russia from the 1917 Revolution to the present; the radical transformation of a state, economy and society in revolution and civil war, the Stalin dictatorship, the trial of World War II, and the patterns of reform and continuity in the post-Stalin and po
HIS	3360	Women in the Pre-Modern West	3	Fall 2016	Roles of women from ancient world to revolutionary France, including analysis of the status of women in Biblical, Greek, Roman, medieval, early modern and Enlightenment cultures and times. Themes of motherhood, women's work, women in literature and women
HIS	3995	Topics in European History	3	Spring 2021	Selected topics in European history of interest to faculty and students.
HIS	4041	Hist Modern Middle East	3	Spring 2019	The political, economic and social history of the Middle East with emphasis on the passing of imperial institutions and emergence of republics, trade and commerce, colonialism, and revolutionary movements.
HIS	4090	Women in the Middle East	3	Fall 2020	Roles of Middle Eastern women from the seventh century to the present era. Women's lives and experiences, with emphasis on their influence and contribution to the economy, politics, literature and the arts. Attention to the effects of regional, ethnic,
HIS	4095	Top Middle Eastern Hist	3	Spring 2021	Selected topics in Middle Eastern history of interest to faculty and students.
HIS	4120	Emergence Modern Africa	3	Fall 2020	The impact of 19th century European colonialism on Africa; the division of Africa into European dependencies; change and continuity in African culture; the emergence of independent African nation states after World War II; their difficulties and opportuni
HIS	4195	Topics African History	3	Fall 2021	Selected topics in African history of interest to faculty and students.
HIS	4320	Modern East Asia	3	Fall 2021	The political, economic and social history of Modern East Asia (China, Japan and Korea) with an emphasis on the impact of the West, the Japanese Empire and the development of modern institutions.
HIS	4325	Modern China I, 1644-1912	3	Fall 2020	Survey of Chinese history, 1644 to 1912, covering demise of last Chinese empire: the Qing empire. Topics include emergence of commercial society; Opium Wars, Imperialism, engagement with European world, and demise of the Empire and birth of modern Chinese
HIS	4330	Modern China II, 1912-Present	3	Spring 2021	China during its republican and Communist periods.

HIS	4365	Modern India and Pakistan	3	Spring 2020	Modern history of the Indian subcontinent from late Mughal Empire to the present. Themes include: expansion of British power, anti-colonial nationalism, birth of India and Pakistan, and contemporary politics, economics, and culture in the region.
HIS	4395	Topics in Asian History	3	Spring 2017	Selected topics in Asian history of interest to faculty and students.
HIS	4415	Revolutionary Latin America	3	Spring 2017	Latin America's revolutionary century from the beginnings of political revolt in the 1780s to the beginning of economic modernization in the 1880s. Social and economic impact of the Bourbon Reforms; indigenous revolts and slave rebellions; liberal revolus
HIS	4495	Topics Latin Amer Hist	3	Spring 2018	Selected topics in Latin American history of interest to faculty and students.
HIS	4499	Topics in World History	3	Fall 2020	Selected topics in world or non-western history of interest to faculty and students.
HIS	4526	Mod Science Art Invention	3	Fall 2016	Interactions among science, technology and art that have shaped modern culture since the industrial revolution of the late 18th century. Special attention to the sources, styles, and contexts of creativity in various fields.
HIS	4620	20th Cent Military Hist	3	Spring 2021	The major wars of the 20th century: World War I, World War II, Korea and Vietnam. Cold War, wars of liberation.
HIS	4996	Topics History of Gender	3	Spring 2020	Selected themes in the history of gender examined in depth.
HIS	4997	Topics in the History of Race	3	Fall 2021	Selected themes in the history of race examined in depth.
HIS	4998	Topics in Public History	3	Fall 2021	Selected themes in public history examined in depth.
HIS	5001	Junior Research Seminar	3	Fall 2021	The junior research seminar introduces majors to research methods, sources, and historiography -- how historians have reconstructed, interpreted, and written about the past. By examining diverse interpretations and historical controversies, the seminars h
HIS	5501	Sem in Historical Methodology	3	Fall 2021	Student research and reports. Seminar format. Written permission of chair required.
HIS	5515	Independent Research	3	Summer 2021	An intensive research project under individual direction. Written permission of chair required.
HON	1000	Interdisc Humanities I:PHI	3	Fall 2020	Major works and ideas from the classical Graeco-Roman and Christian traditions. Emphasis on philosophical ideas. Extensive reading and writing requirements. Team-taught.
HON	1001	Interdisc Humanities I:LIT	3	Fall 2016	Major works and ideas from the classical Graeco-Roman and Christian traditions. Emphasis on literature and drama. Extensive reading and writing requirements. Team-taught.
HON	1003	Interdisc Humanities I: THL	3	Fall 2020	Major works and ideas from the Graeco-Roman and Christian traditions. Emphasis on religious thought and development. Extensive reading and writing requirements. Team-taught.
HON	1005	Interdisc Humanities I	1	Fall 2020	Honors seminar on major works and ideas from the classical Graeco-Roman world. Emphasis on literature, drama, and performance.
HON	1006	Interdisc Humanities II	1	Spring 2021	Honors seminar on major works and ideas from the medieval, Renaissance, and early modern periods. Emphasis on literature, drama, and performance.
HON	1007	Interdisc Humanities III	1	Fall 2021	Honors seminar on major works and ideas from the modern and contemporary periods. Emphasis on literature, drama, and performance.
HON	1051	Interdisc Humanities II:LIT	3	Spring 2021	Major works and ideas from the Medieval period to the French Revolution. Emphasis on the evolution in literature from medieval to modern. Extensive reading and writing requirements. Team Taught. (3 cr) Sem 2. Two coreq: HON 1050, 1052, 1053, 1054.
HON	1053	Interdisc Humanities II:THL	3	Spring 2021	Major works and ideas from the Medieval period to the French Revolution. Emphasis on the evolution in religious thought and institutions from medieval to modern.
HON	2002	Interdisc Humanities III: HIS	3	Fall 2021	Major works and ideas of the 19th and 20th centuries, with emphasis on historical developments. Extensive reading and writing requirements. Team-taught.
HON	2005	Interdisc Humanities III: ETH	3	Fall 2021	Major works and ideas of the 19th and 20th Centuries, with emphasis on ethical thought. Extensive reading and writing requirements. Team taught.
HON	2560	Social Science Seminar	3	Spring 2017	Methodology of empirical and statistical analysis in the social sciences. Computer applications to data analysis, model designs and theory testing.
HON	3100	Classics	3	Spring 2018	
HON	3600	Literature	3	Fall 2019	
HON	3850	Geography	3		
HON	4000	History	3	Spring 2018	
HON	4075	Humanities	3		Honors Seminar. Topics will vary.
HON	4090	Humanities	3		Honors Seminar. Topics will vary.
HON	4200	Topic: Criminology	3		Topics addressing special or emerging interests, chosen for their current importance and the specific expertise of an instructor.
HON	4300	Philosophy	3	Spring 2019	
HON	4301	Philosophy	3	Spring 2018	
HON	4400	Justice Seminar Abroad	3		Two week intensive course abroad examining social justice efforts in another country. Lectures by local experts and site visits.
HON	4500	Political Science	3	Fall 2016	
HON	4700	Psychology	3		
HON	4701	Psychology	3		
HON	4800	Theology & Religious Studies	3	Fall 2021	
HON	4900	Sociology	3	Fall 2016	
HON	5001	Shaping A College Life	1	Fall 2021	Shaping a College Life aims at helping Honors students navigate successfully the transition of high school to college by inviting them into a co-curricular one-credit experience focused around several themes. This is a graded course that can be bundled wi

HON	5002	Shaping A College Life II	1	Shaping a College Life II continues the themes of Shaping a College Life, and invites students to have a reflective experience that provides the opportunity to gain a deeper understanding of yourself, your peer group, and Villanova. This is a graded course
HON	5003	Shaping a Work Life	1 Fall 2021	Professional development seminar focusing on the meaning of work and developing and achieving career goals. Course will combine in-class and out-of-class activities engaging students to explore career and calling.
HON	5100	Theatre Theory and Performance	3 Fall 2018	Topics, genres, and practice in production, performance, and critical vocabulary with which to analyze and discuss what is seen and read; texts which engage critically with performance. Staging challenges and performance possibilities offered by stage scr
HON	5300	Enrichment: Topics	1 Spring 2021	Intensive experiential courses providing enrichment opportunities. Individual and group participation directed toward enhancing intellect and delight.
HON	5305	Colloquium	1 Fall 2021	Colloquium is a one-credit seminar for Honors students that is capable of being bundled into a 3-credit course. Course meets once a week. Discussion of books and readings selected by instructor. May be repeated.
HON	5400	Performing Arts: Dance	1 Spring 2021	Intensive experiential courses in performance, literary, and plastic arts. Individual and group participation directed toward reflexive understanding of one's self as engaged in the process of creativity.
HON	5410	Performing Arts: Instrument	1 Fall 2021	Intensive experiential courses in performance, literary, and plastic arts. Individual and group participation directed toward reflexive understanding of one's self as engaged in the process of creativity.
HON	5440	Literary Arts:Poetry	1 Fall 2021	Intensive experiential courses in performance, literary, and plastic arts. Individual and group participation directed toward reflexive understanding of one's self as engaged in the process of creativity.
HON	5460	Plastic Arts: Painting	1 Fall 2021	Intensive experiential courses in performance, literary, and plastic arts. Individual and group participation directed toward reflexive understanding of one's self as engaged in the process of creativity.
HON	5490	Culture Leadership Workshop	1 Fall 2021	Civic engagement skill set development in global events; cultural trends; intercultural communication; and discourse across academic disciplines.
HON	5500	Ind Study & Research	3 Fall 2021	Independent Study and Research
HON	5501	Ind Study & Research	3 Spring 2021	Independent Study and Research
HON	5506	Ind Study & Res Science	3 Fall 2021	Independent Study and Research in Science
HON	5507	Ind Study & Res Science	3 Spring 2021	Independent Study and Research in Science
HON	5598	Teaching Practicum	1 Spring 2021	Teaching Practicum.
HON	5599	Teaching Practicum	3 Fall 2021	Intern teaching under supervision of Practicum Coordinator.
HON	5700	Colloquia	3 Fall 2021	
HON	5702	Colloquia	3 Fall 2017	
HON	5750	Colloquia	3 Fall 2019	
HON	6000	Senior Thesis I	3 Fall 2021	Major independent research project under the direction of a thesis advisor. The first semester includes a comprehensive proposal and bibliography, research design, detailed outline, and substantive writing sample.
HON	6002	Senior Thesis II	3 Fall 2021	Major independent research project under the direction of a thesis advisor. In addition to completing the thesis, students must participate in the Senior Research Conference and thesis defense.
HON	6003	Oral Exam Capstone	1 Fall 2021	Course will prepare students pursuing the Honors Degree through the non-thesis track for their oral examination.
HS	2000	Intro:Prin & Survey Prac	3 Fall 2017	Course is Writing Enriched.
HS	2100	Assessment and Referral	3 Spring 2018	
HS	3500	Gerontology	3 Spring 2017	
HS	3700	Human Service Systems	3 Spring 2018	Organizational structures, trends and influences that impact Human Services Systems. Special emphasis upon managed care and case management as well as Human Resource Development.
HS	3900	Human Services Ind. Study	3 Spring 2017	Supervised research or field experience project and paper. Students may only register for this class once, and it cannot take the place of any Human Service course requirements.
HUM	1903	Internship	3 Spring 2021	
HUM	1906	Internship	3 Fall 2020	
HUM	1975	Epiphanies of Beauty	3 Fall 2021	Exploration of literary arts as illuminating human condition and mystery of creation through several genres: novel, novella, drama, poetry, short story. T.S. Eliot, Claudel, G.M. Hopkins, J. Joyce, Flannery O'Connor, R.L. Stevenson, O. Wilde.
HUM	2001	THL:God	3 Fall 2021	What is religion, anyway? Do we need it anymore? What is the place of religion in the contemporary world? How revelation might illuminate God and creation in a way that transforms the world? Fulfills an upper level Theology in the Core Curriculum.
HUM	2002	Human Person	3 Fall 2021	What is human nature, human destiny? How does one become more deeply human? What does it mean to act for the human good? How can we discover meaning in primordial human experiences such as love, mortality, finitude, and suffering?
HUM	2003	PHI:World	3 Spring 2021	Modern science is a dominant way of interpreting the world, and so human life. How does modern science interpret the world? What are the effects of this interpretation on the way we view human beings? Fulfills an upper level Philosophy in the Core Curri
HUM	2004	PSC:Society	3 Fall 2021	Political, economic, and family life dominate our concerns and yet we seem cynical about possibly finding meaning in them. How is our dependent, rational nature developed through marriage, family, work, markets, and government? Fulfills an upper level P

HUM	2100	HIS:The Goods & the Good Life	3	Spring 2021	Explore issues in economic life through texts in theology, philosophy, history, anthropology, literature, and arts. Why do we work, what is the difference between work and toil? What does the production and consumption of things tell about the human pers
HUM	2900	Topics	3	Fall 2021	Specific topics vary each semester.
HUM	2950	Vocation and Purpose	1	Fall 2021	Reflection on Villanova college experience in guided seminar discussion and workshops designed to envision and shape post-graduate career and life paths. Restriction: Instructor Permission
HUM	2993	Internship	3	Fall 2021	
HUM	2996	Internship	6	Fall 2021	Humanities majors must satisfy all requirements set by the Internship Office. Students must submit a 10-15 page essay to the Humanities Chair copying the Internship Office. See department web page for particulars.
HUM	3000	ENG: The Catholic Imagination	3		Investigates life as drama; investigates themes of sin, grace, redemption, creation and incarnation, how these disclose the human person. Fulfills an upper level Literature in the Core Curriculum.
HUM	3001	ENG:Lewis Tolkien & Inklings	3	Spring 2021	Explores the fictional, theological, and philosophic writing of C.S. Lewis, J.R.R. Tolkien, and the Inklings (Charles Williams, Dorothy L. Sayers, G.K. Chesterton, George MacDonald). Investigates the relationship between fantastic "otherworldly" fiction a
HUM	3200	PSC: Politics & Human Nature	3	Spring 2021	Our conception of human nature arises in part from our practice of politics and vice versa. What is the relationship between the way we think about the nature and meaning of human life and the practice of politics? Fulfills an upper level Political Scie
HUM	3400	Nature, Technology, America	3		How has America reconciled its reverence for nature with its exceptional claims of technological prowess? Explores the intersection of nature and technology using Leo Marx's idea of "the machine in the garden" in American cultural, social, and art history
HUM	4000	Jews,Christians,Muslims:Dialog	3	Spring 2021	An overview of the context of radical pluralism within which contemporary discourse occurs. An examination of the challenges of this situation, an observation of Aquinas' interaction with other thinkers, and a proposal for this medieval model for inter-r
HUM	4200	Forgiveness:Pers & Pol	3	Spring 2020	This seminar mimes recent discussions that address these crucial questions: Does forgiveness abrogate justice? What is the place of anger and hate? May we forgive persons who will not repent? Is forgiveness a duty? Can forgiveness resolve political d
HUM	4350	PHI: Problem of Love	3	Fall 2021	Reading a broad survey of philosophical discussions of love, from Plato to Derrida, we will address a variety of questions concerning the nature of love, the relationship between self-interest, self-love, and love of other, whether Christianity makes a di
HUM	5950	Citizenship & Globalization	3	Summer 2019	Examination of the sweep of British History since 1327, with special attention to four periods: Medieval England; Early-Modern London and Reformation, Renaissance, and Revolution; Eighteenth and Nineteenth Century Britain and the growth of Empire; and Pos
HUM	5975	Pellegrinaggio: Augustine	3	Fall 2016	Learn more about the life and works of St. Augustine of Hippo. Examination of the life and writings of St. Augustine in preparation for the pilgrimage to Italy, and on-site exploration of Augustine's historical context and legacy.
HUM	6000	Great Thought Seminar	3	Fall 2019	Focused engagement with great text, great thinker, great idea in the intellectual tradition. Examples include: Brothers Karamazov, Plato's Republic, Wordsworth, Frank Lloyd Wright, John Ruskin, Thomas Aquinas. Course explores basic human questions as illu
HUM	6500	Senior Seminar	3	Spring 2021	The department's capstone is a seminar, meeting once a week, in which students read contemporary texts on issues they have engaged in their study of the humanities.
HUM	6950	Ind Study & Research	3	Fall 2021	
INS	1020	Prin of Risk Insurance	3		
INS	2107	Intro Statistics I	3		
INS	2108	Intro Statistics II	3		
IS	1111	Introductory Irish Language I	4	Fall 2021	Groundwork in Irish (Gaelic), including oral proficiency, aural comprehension, and reading knowledge; for students with no prior knowledge of Irish. Supplementary language laboratory work and oral drills.
IS	1112	Introductory Irish Language II	4	Fall 2021	Groundwork in Irish (Gaelic), including oral proficiency, aural comprehension and reading knowledge; for students with one semester of Irish study completed. Supplementary language laboratory work and oral drills. Students should have completed IS 1111 or
IS	1121	Intermediate Irish Language I	3	Fall 2021	Review of grammar and vocabulary in Irish (Gaelic). Recitations, readings and oral drills. Supplementary cultural study, language laboratory, and conversation comprehension. Prerequisites: IS 1111 and 1112, equivalent or permission of instructor. Taught b
IS	2222	Topics: Irish Language	3	Spring 2020	Specific topics concerning the Irish language (Gaelic); topics vary by semester.
IS	3100	Topics: Irish Studies	3		Study of topics of special interest in Irish Studies, both on campus and abroad. May be repeated two times if topics change.
IS	4000	Intro Irish Studies Abroad	1		On the culture, history, politics of Ireland. Presentations by the Academic Program Coordinator, readings on Irish culture and society, and field trips. Required of all students participating in the summer abroad program at NUI Galway, Ireland.
IS	4100	Spec Top in Irish Studies	3	Spring 2020	Perspectives on the culture and history of Ireland. Presentations by the Resident Program Director, lectures by a range of NUI faculty, readings by noted Irish writers, performances by a local musicians, and field trips. Required of all students partici

IS	4101	Studying in Ireland	1		Intercultural education preparing for study in Ireland through critical readings, reflective writing, and foundational concepts in Irish Studies.
IST	1100	Latin American Seminar	3		
ISYT	1000	Intro to Info Sys & Tech	3	Fall 2021	An overview of key ideas, principles, and theories related to information systems and technology. Develops a combination of technical and business skills.
ISYT	1100	Data and Information Mgmt	3	Summer 2021	An overview of data and information management for professionals.
ISYT	5993	Info System&Tech Indp Study	3	Spring 2021	Reading research and/or projects in a selected area of information systems & technology under the direction of a member of the staff. May be repeated for credit Director's Approval; CPS.
ITA	1111	Introductory Italian I	4	Fall 2021	Groundwork in Italian, including oral proficiency, aural comprehension and reading for students with no prior knowledge of Italian. Supplementary language laboratory work and oral drills.
ITA	1112	Introductory Italian II	4	Spring 2021	Groundwork in Italian, including oral proficiency, aural comprehension and reading for students. Supplementary language laboratory work and oral drills.
ITA	1121	Intermediate Italian I	3	Fall 2021	Review of grammar, composition, reading and conversation. Students should have completed ITA 1111 and 1112 or the equivalent.
ITA	1122	Intermediate Italian II	3	Spring 2021	Review of grammar, composition, reading and conversation. Students should have completed ITA 1121 or the equivalent.
ITA	1131	Conversation & Composition I	3	Fall 2021	Intensive practice in conversation and composition with emphasis on developing advanced language skills in Italian.
ITA	1132	Conversation & Composition II	3	Spring 2021	Further practice in conversation and composition with focus on advanced proficiency in Italian. Students should have completed ITA 1131 or the equivalent.
ITA	1138	Advanced Grammar	3	Fall 2021	Intensive practice of spoken and written Italian.
ITA	1140	Writing & Stylistics in Ita.	3	Spring 2020	Intensive practice in written expression and textual analysis. Compositions are modeled on selected Italian texts.
ITA	1141	Italy in Business	3	Fall 2021	An overview of contemporary Italy from the perspective of business (leading brands, productive sectors, marketing strategies, financial trends, law and politics).
ITA	2220	Italian Lit and Culture I	3	Spring 2021	Introduction to Italian literature and culture from the Middle Ages to the Renaissance. A required course for majors. Pre-requisite: ITA 1131 or authorization from instructor.
ITA	2221	Italian Lit. and Culture II	3	Fall 2018	Introduction to Italian literature and culture from the Baroque to the 20th century. A required course for majors. Pre-requisite: ITA 1131 or authorization from instructor.
ITA	2222	Italians and America	3	Fall 2018	Introduction to the cinematographic and literary images of Italians and Italian-Americans, from the discovery of the new world to the present.
ITA	2225	Italian Music	3	Spring 2018	The interaction of musical performance and poetry (from opera to contemporary songwriting) and the role of music in Italian society. Pre-requisite: ITA 1131 or authorization from instructor.
ITA	2314	Italian Poetry	3	Fall 2019	A selection of masterpieces of Italian poetry from the origins to the present. Pre-requisite: ITA 1131 or authorization from instructor.
ITA	2324	Diversity, Gender, Race	3	Spring 2020	The course addresses issues of identity related to diversity mainly gender, but also race in modern Italy. Pre-requisite: ITA 1131 or authorization from instructor.
ITA	2993	Italian Internship Project	3		Students may receive up to 3 credits for an internship experience in an Italian business, non-profit, government agency, museum, or an Italian cultural association. Approval of the Italian Coordinator is required. Pre-requisite: ITA 1131 or authorization
ITA	3064	Performing Comedy	3		Reading and staging of a theatrical piece in Italian. The course includes grammar review, critical interpretation and production of the text. Pre-requisite: Any ITA course at the 2000 level or authorization from instructor.
ITA	3074	Intro to Italian Cinema	3	Spring 2021	A critical introduction to the masterpieces of the Italian cinema from DeSica and Fellini to Tornatore and Sorrentino. Pre-requisite: Any ITA course at the 2000 level or authorization from instructor.
ITA	3075	Visual History of Italy	3	Fall 2016	A study of Italian history and culture with an emphasis on film, painting, and architecture. In Italian. Pre-requisite: Any ITA course at the 2000 level or authorization from instructor.
ITA	3285	Italy and Europe	3		The contribution and role of Italy in the European politics, economy, and culture, from its making as a nation to the present. Pre-requisite: Any ITA course at the 2000 level or authorization from instructor.
ITA	3365	The Italian Theatre	3	Fall 2020	A selection of masterpieces of Italian theatre, from the Renaissance to modern times. Pre-requisite: Any ITA course at the 2000 level or authorization from instructor.
ITA	3366	Italian Opera	3		Introduction to Italian opera from Monteverdi to Verdi and Puccini. Pre-requisite: Any ITA course at the 2000 level or authorization from instructor.
ITA	3412	Special Topics	3	Spring 2019	Advanced study of topics of special interest in Italian literary and/or cultural studies. May be repeated for credit if topic changes. Pre-requisite: Any ITA course at the 2000 level or authorization from instructor.
ITA	3413	Topics on Italy and Beauty	3	Spring 2020	Advanced study of expressions of beauty as manifested in Italian Culture (Literature, Art, Philosophy, Design, and Commerce). Offered in Italian. Pre-requisite: Any ITA course at the 2000 level or authorization from instructor.
ITA	3455	Dante's Divine Comedy	3		Selected readings in Italian from Dante's masterpiece. Pre-requisite: Any ITA course at the 2000 level or authorization from instructor.
ITA	3545	Petrarca and Boccaccio	3		The major works of Francesco Petrarca and Giovanni Boccaccio. Pre-requisite: Any ITA course at the 2000 level or authorization from instructor.
ITA	3725	The Italian Baroque	3		An introduction to the poetics and the main artists of the Italian Baroque. Caravaggio, Bernini, Galileo, Marino, Vico, commedia dell'arte, opera. Pre-requisite: Any ITA course at the 2000 level or authorization from instructor.

ITA	3824	Classics and Romantics	3	An overview of Italy's culture in the 18th and 19th centuries: neo-Classicism, Romanticism (Foscolo, Leopardi, Manzoni) and Risorgimento. Pre-requisite: Any ITA course at the 2000 level or authorization from instructor.
ITA	3925	Italian Modernism	3	Literature and art of the 20th century. Futurism, avant-gardes, Pirandello, De Chirico, Calvino and postmodernism. Pre-requisite: Any ITA course at the 2000 level or authorization from instructor.
ITA	3971	Directed Research in Italian	1 Fall 2021	Directed semester-long research project that satisfies the College research requirement, taken in conjunction with another upper-level ITA content course. Pre-requisite: ITA 2220, ITA 2221 or approval from the ITA coordinator.
ITA	5900	Independent Study	3 Fall 2021	
JPN	1111	Introductory Japanese I	6 Fall 2021	Functional use of Japanese for students with no prior knowledge of Japanese. Communication skills (speaking and listening), reading and writing skills. Supplementary practice with computer. JPN 1111 or equivalent or permission of instructor.
JPN	1112	Introductory Japanese II	6 Summer 2021	Functional use of Japanese for students with no prior knowledge of Japanese. Communication skills (speaking and listening), reading and writing skills. Supplementary practice with computer. JPN 1112 or equivalent or permission of instructor.
JPN	1121	Intermediate Japanese I	5 Fall 2021	Further practice of communication skills (speaking and listening), reading and writing skills. Supplementary practice with computer.
JPN	1122	Intermediate Japanese II	5 Spring 2021	Further practice of communication skills (speaking and listening), reading and writing skills. Supplementary practice with computer. JPN 1121 or equivalent or permission of instructor.
JPN	1131	Advanced Japanese I	3 Fall 2021	Advanced practice of communication skills - oral, speech and discussion skills, reading and writing skills. Supplementary practice with computer. JPN 1122 or equivalent or permission of instructor.
JPN	1132	Advanced Japanese II	3 Spring 2021	Advanced practice of communication skills - oral, speech and discussion skills, reading and writing skills. Supplementary practice with computer. JPN 1131 or equivalent or permission of instructor.
JPN	1133	Advanced Japanese III	3 Fall 2021	Advanced practice of communication skills including reading, discussing topics on current events and speech. Supplementary practice with computer. JPN 1132 or equivalent or permission of instructor.
JPN	1134	Advanced Japanese IV	3 Spring 2017	Advanced practice of communication skills including reading, discussing topics on current events and speech. Supplementary practice with computer. JPN 1133 or equivalent or permission of instructor.
JPN	2102	Japanese Film	3 Fall 2021	Introduction to Japanese film to those who are interested in but not necessarily exposed to Asian culture and language. Fulfills requirements for minor in Japanese.
JPN	2143	Japanese Animation	3 Fall 2018	Explores how anime is a reflection of Japanese society, art & culture. Introduction to rich & varied world of Japanese animated films by considering anime as medium, art, culture, & industry. Introduction to history, theory, aesthetics & cultural aspects o
JPN	2144	Japanese Culinary Culture	3 Spring 2020	General introduction to Japanese culinary culture, relationship to Japanese society & culture in general, & historical & cultural reasons it has developed as it has. Familiarizes students with historical & modern Japanese cuisine. Discusses historical, ge
JPN	3412	Special Topics	3 Fall 2021	Advanced study of topics of special interest in Japanese literary and/or cultural studies. May be repeated for credit if topic changes. Fulfills requirements for Japanese minor and concentration in East Asian Studies. Taught in English.
JPN	5900	JPN:Independent Study	3 Fall 2021	Supervised study, activity or research. May be taken more than once. Prior approval of chair and instructor.
LA	1903	Internship Elective	3 Fall 2021	Permission of Program Director required. Rising sophomore standing (minimum 30 credits completed) with a 3.0 overall GPA for fall or spring internship; 2.7 overall GPA for summer internship.
LA	1904	Global Internship	3 Fall 2021	Global internship course. Must secure approval of Office for Undergraduate Students (OUS) Internship Office.
LA	1906	Internship Elective	6 Fall 2021	Permission of Program Director. Rising sophomore standing (minimum 30 credits completed) with a 3.0 overall GPA for fall or spring internship; 2.7 overall GPA for summer internship
LA	1909	Internship Elective	9 Fall 2021	Permission of Program Director. Rising sophomore standing (minimum 30 credits completed) with a 3.0 overall GPA for fall or spring internship. 2.7 overall GPA for summer internship.
LA	2993	Internship	3 Fall 2021	Credits may be applied to requirements for the major in Liberal Arts in the required Liberal Arts elective slots. Permission of Program Director. Rising sophomore standing (minimum 30 credits completed) with a 3.0 overall GPA for fall or spring internshi
LA	2996	Internship	6 Fall 2021	Credits may be applied to requirements for the major in Liberal Arts in the required Liberal Arts elective slots. Permission of Program director. Rising sophomore standing (minimum 30 credits completed) with a 3.0 overall GPA for fall or spring internship
LAS	3412	Special Topics	3 Fall 2019	Study of topics of special interest in Latin American Studies. Topics to be arranged.
LAS	3950	Latin American Studies Seminar	3 Spring 2017	
LAS	5000	Internship	3 Fall 2021	Global, cross-cultural experience. Six weeks of summer practicum at a major economic, political, or cultural institution in Chile.
LAS	6000	Independent Study & Research	3 Fall 2021	Independent research on a topic relevant to Latin America. Cross-disciplinary. Required integration of theory and data.
LAT	1111	Introductory Latin I	3 Fall 2021	Basic forms, syntax and vocabulary; selected Latin prose in second semester.

LAT	1112	Introductory Latin II	3	Spring 2021	Basic forms, syntax and vocabulary; selected Latin prose in second semester.
LAT	1113	Intensive Introductory Latin	3		Intensive one-semester course covering all basic skills (grammar, morphology, vocabulary) needed to translate Latin.
LAT	1121	Intermediate Latin I	3	Fall 2021	Review of Latin syntax; selected readings from prose and poetry.
LAT	1122	Intermediate Latin II	3	Spring 2021	Review of Latin syntax; selected readings from prose.
LAT	3001	Readings in Authors	3	Fall 2021	Selected readings from a variety of Latin authors.
LAT	3050	Prose Composition	3		Practice in the composition of Latin in a variety of styles.
LAT	4450	Tacitus	3		Extensive reading in the Annales; Tacitus as historian of the early principate. Fulfills advanced literature requirements.
LAT	4550	Suetonius	3		Reading of the major Lives; Suetonius conception of biography, the historical and literary value of the Lives.
LAT	5350	Ovid	3	Spring 2017	Ovid as an epic poet of the Augustan age.
LAT	5900	Latin: Independent Study	3	Spring 2021	Supervised study, activity or research. May be taken more than once. Prior approval of chair and instructor.
LDR	2000	Foundations of Leadership	3	Fall 2021	Introduction to the concepts of and approaches to leadership. Historical and contemporary leadership theories.
LDR	2010	Strategic Planning for Leaders	3	Fall 2021	The strategic planning process in organizations. Mission, values, goals, alignment and accountability in the development and execution of a strategic plan.
LDR	2020	Leadership & Community	3	Spring 2021	Leadership in the public sector. A study of leaders in politics, civil rights, academics/research and corporations. Evaluation of effective/ineffective leadership styles.
LDR	2030	Leading with a Digital Mindset	3	Summer 2021	Analysis of the implications of technology on leadership. The strategic role of technology in organizations. Define and analyze attitudes and behaviors of a "digital mindset".
LDR	2040	Ethics & Leadership	3	Fall 2021	The nature of ethical leadership. How the leader's values and beliefs affect decision making. The concepts of organizational and social responsibility.
LDR	2050	History of Leadership	3	Fall 2021	This course evaluates the history of leadership and leaders from both the theoretical and practical perspective. Historical aspects examined will include war, peace, severe economic conditions, technology advances, societal changes, and the evolution of o
LDR	2060	Global Strategic Leadership	3	Spring 2021	Global leadership dynamics and strategy. Cross-cultural awareness; ethics and social responsibility and international and global contexts
LDR	2070	Strategy Driven Talent Mgmt	3	Summer 2021	Develop a personal talent management philosophy and plan. Improve ability to reflectively lead talent management efforts. Develop the capacity to analyze and assess talent management practices. Sharpen decision making and problem solving techniques. Re
LDR	2080	Leadership Communication	3	Spring 2021	Explore strategies and tactics for engaging and inspiring your team, clients, and partners. Includes topics such as communicating your vision, social media strategy, storytelling, and crisis communication.
LDR	3400	Leadership Internship Practicum	3	Spring 2018	Approved semester project involving supervised practical application of previously learned knowledge. Supervision by faculty member and staff. Permission of Dean required
LDR	5000	Leadership Capstone Course	3	Fall 2020	Utilizes integration and analysis of leadership principles. Case studies and team-based project covering major topics in the leadership curriculum.
LDR	5940	Leadership Topics	3	Fall 2021	Presentation of selected topics in leadership. May be repeated for credit if topics are different. Pre-requisites may be imposed depending on the topics.
LDR	5950	Special Topics in Leadership	1	Spring 2021	Intensive workshops or seminars in selected areas of leadership that focus on professional development and applied knowledge. May be repeated for credit if topics are different. Pre-requisites may be imposed depending on the topics.
LDR	5993	Leadership Topics	3	Summer 2020	Reading, research and/or projects in a selected area of leadership under the direction of a member of the staff. May be repeated for credit.
MAT	1000	Math and Stat Communities	1	Fall 2021	Understanding the role of creative thinking, problem solving, and collaboration in mathematics and statistics; exploration of research and careers in the mathematical and statistical sciences; building community with fellow mathematics and statistics major
MAT	1220	Discrete Math Social Sci	3	Spring 2017	Discrete mathematics for the Liberal Arts student: voting methods, weighted voting, fair division, apportionment, circuits, network, trees, directed graphs, planning and scheduling, linear programming, growth and symmetry. Not open to students who have
MAT	1280	Mathematics of Fairness	3	Spring 2021	Examining fairness in our personal lives and in society: Voting systems and power indices, strategic political positioning spatial models, fair division, congressional district apportionment, game theory, the GINI index of economic inequality, gerrymander
MAT	1290	Topics in Core Mathematics	3	Spring 2021	Course in an area of pure or applied mathematics or statistics. May be repeated for credit if areas of topical focus are different. Designed specifically to satisfy the core requirement in mathematics and statistics, for students in the humanities and soc
MAT	1312	Biocalculus	4	Fall 2021	Discrete and continuous dynamics of biological systems: discrete dynamical systems, sequences, functions, discrete and continuous limits, the derivative, the integral, methods and applications of differentiation and integration, Taylor polynomials, modeli
MAT	1314	Modeling for the Life Sciences	3	Spring 2021	Mathematical and statistical modeling in the Life Sciences. Topics selected from: dynamical systems, diffusion, Markov, Bayesian, connectionist, and information theory models, applied to epidemiology, ecology, neuroscience and neuron signaling, cell and m
MAT	1320	Calculus I for Liberal Arts	3	Fall 2021	Calculus for Liberal Arts students: polynomial, rational and transcendental functions, the derivative, numerical and graphical introduction to integration.

MAT	1345	Multivar Optim for Soc. Sci.	3		Solving real-world problems using multivariable models, calculus, and technology: problem formulation, translation between mathematical symbols and verbal descriptions, multivariable modeling with real data, regression analysis, partial derivatives and un
MAT	1400	Business Calculus	4	Fall 2021	Functions, limits, and basic definitions of differential and integral calculus. Techniques of differentiation and integration. The Fundamental Theorem of Calculus. Applications in various areas of business and economics.
MAT	1500	Calculus I	4	Fall 2021	Limits, transcendental functions (logarithms, exponential functions, inverse trigonometric functions), differentiation (definition, tangent lines, rates of change, techniques, implicit differentiation, related rates), applications of differentiation (grap
MAT	1505	Calculus II	4	Fall 2021	Integration (indefinite, definite), applications of integration (area, volume, applications to physics and economics, etc.), methods of integration, approximate integration (trapezoidal and Simpson's rules), improper integrals, differential equations, inf
MAT	1903	Internship Elective	3	Fall 2021	Internship Elective
MAT	1906	Internship Elective	6	Summer 2021	Internship Elective
MAT	2400	Linear Algebra for Computing	4		Vectors, matrices, and matrix algebra; systems of linear equations; matrix inverses; least squares problems; eigenvalues and eigenvectors; using Python for computational linear algebra; applications from areas such as data science, computer graphics, grap
MAT	2500	Calculus III	4	Fall 2021	Parametric equations; polar, cylindrical, and spherical coordinates; vectors and the geometry of space; vector functions (derivatives, integrals, curvature, etc.); partial derivatives; optimization; multiple integration and its applications; vector calcul
MAT	2600	Foundation of Math I	3	Fall 2021	Topics selected from natural numbers, mathematical induction, irrational and transcendental real numbers, complex numbers, Fundamental Theorem of Algebra, infinite cardinals, symbolic logic, functions and relations, iterated functions, mathematical chaos.
MAT	2705	Diff Equation with Linear Alg	4	Fall 2021	First order and linear second order differential equations, matrices and linear equation systems, eigenvalues and eigenvectors, and linear systems of differential equations.
MAT	2993	Internship	3	Fall 2021	Internship
MAT	2996	Internship	6	Summer 2021	Internship
MAT	3001	Topics in Mathematics & Stats	1		Lecture course in an area of mathematics or statistics. May be repeated for credit if topics are different.
MAT	3011	Problem Solving Seminar	1	Fall 2021	Explore techniques for solving mathematical problems, including problems typical of the Putman Mathematical Competition. Students solve and present solutions to problems posed.
MAT	3100	Applied Linear Algebra	3	Fall 2021	Vectors, matrices, transpose and inverse of a matrix, systems of linear equations, the four fundamental subspaces, eigenvalues and eigenvectors, symmetric matrices, matrix factorizations, applications such as information retrieval, ranking web pages, grap
MAT	3300	Advanced Calculus	3	Fall 2021	Real numbers, sequences, convergence, supremum and infimum, completeness of the reals, continuous functions, Intermediate Value Theorem, differentiable functions, Mean Value Theorem, Riemann integral, Fundamental Theorem of Calculus, Taylor's Theorem.
MAT	3305	Topics in Analysis	3	Spring 2019	Advanced topics selected from real analysis, complex analysis, or higher analysis.
MAT	3400	Linear Algebra	3	Fall 2021	Vector spaces, linear transformations, basis and dimension, orthogonal transformations, least squares, eigenvalues and eigenvectors, similarity, diagonalization, symmetric, applications.
MAT	3500	Modern Algebra I	3	Fall 2021	Topics selected from groups and subgroups, cyclic groups, permutation groups, isomorphisms, direct products, cosets and Lagrange's Theorem, normal subgroups and factor groups, group homomorphisms, the Fundamental Theorem of Finite Abelian Groups, rings, f
MAT	3930	History of Mathematics	3	Fall 2021	Development of mathematics from ancient times to the birth of calculus in the seventeenth century.
MAT	4110	Combinatorics	3	Spring 2020	Induction, permutations and combinations, general counting methods, generating functions, recurrence relations, principle of inclusion-exclusion, graph theory, trees, planarity, crossing numbers, Hamiltonian cycles, Eulerian tours.
MAT	4270	Numerical Analysis	3	Spring 2021	Numerical and computational aspects of root-finding methods, interpolation and polynomial approximation, numerical differentiation and integration, approximation theory.
MAT	4500	Mathematics of Games	3		Study of popular games, toys, and puzzles using recursions, counting techniques, graph theory, group theory, probability, Markov chains, and other mathematical tools.
MAT	4550	Math of Financial Derivatives	3	Fall 2021	Basic tools of financial markets; options; asset price random walks; estimation of parameters; arbitrage put-call parity; Black-Scholes Model; implied volatility; portfolio-optimization; hedging.
MAT	4600	Deterministic Oper Res	3	Spring 2020	Deterministic methods: mathematical optimization, linear programming, formulation and solution techniques, duality, integer linear programming, transportation problem, assignment problem, network flows, dynamic programming.
MAT	5110	Topics in Geometry	3	Fall 2020	Topics selected from affine, hyperbolic, spherical, elliptic, Euclidean or projective geometry.
MAT	5200	Theory of Numbers	3	Spring 2021	Congruences, quadratic reciprocity, Diophantine equations; applications.

MAT	5400	Complex Analysis	3 Spring 2020	Algebra of complex numbers, analytic functions, Cauchy- Riemann equation, Laplace equations, conformal mapping, integrals of complex functions, Cauchy's theorem, power series, Taylor's theorem, Laurent's theorem, residues, entire functions.
MAT	5500	Topology	3 Spring 2020	Topological equivalence, connectedness, compactness, topology of subsets of R^n , manifolds, topological embeddings, topological spaces.
MAT	5600	Differential Geometry	3 Spring 2019	Geometry of curves and surfaces, curvature, first and second fundamental forms, minimal surfaces, use of MAPLE.
MAT	5900	Seminar in Mathematics	3 Fall 2021	Supervised study of selected topics or problems in mathematics, student presentations. May be repeated for credit if content is different.
MAT	5920	Topics in Applied Mathematics	3 Fall 2021	Lecture course in an area of applied mathematics. May be repeated for credit if topics are different.
MAT	5930	Topics in Pure Mathematics	3 Fall 2017	Lecture course in an area of pure mathematics. May be repeated for credit if topics are different.
MAT	5991	Independent Study	1 Fall 2021	Reading in a selected branch of mathematics under the direction of a member of the staff. May be repeated for credit.
MAT	5992	Independent Study	2 Spring 2021	Reading in a selected branch of mathematics under the direction of a member of the staff. May be repeated for credit.
MAT	5993	Independent Study	3 Fall 2021	Reading in a selected branch of mathematics under the direction of a member of the staff. May be repeated for credit.
ME	1201	Intro to Comp Aid Design&Draft	1 Spring 2021	Fundamentals of 3D visualization; using CAD software for design development of parts & assemblies, including materials; and preparing standard engineering drawings with dimensions and fits to communicate mechanical designs.
ME	1205	Computer Program for Mech Engr	3 Spring 2021	Introduction to programming for Mechanical Engineers using MATLAB, data analysis and visualization, algorithm development, linear algebra, numerical methods.
ME	2100	Statics	3 Fall 2021	Vector analysis of force systems on particles and rigid bodies with particular emphasis on mathematical and physical formulation of principles underlying the solution of engineering problems; vector algebra; friction; centroids and moments of inertia.
ME	2101	Dynamic Systems I	3 Summer 2021	Kinematics, velocity, and acceleration of particles in Cartesian, cylindrical, and spherical reference frames, projectile motion, dynamics of particles, momentum principles, systems of particles, rigid body kinematics and dynamics.
ME	2103	Mechanics of Materials	3 Spring 2021	Definition of stress and strain mechanical behavior of material under axial, shear, torsion, bending, and combined loads; stress and strain transformations; deflection of beams; buckling.
ME	2505	M.E. Analysis & Design	4 Fall 2021	Introduction to the design process as a foundation for future mechanical engineering courses. The role that engineering design plays in contemporary society; the creativity and innovation inherent in mechanical engineering design; and development of the
ME	2900	ME Laboratory I	1 Spring 2021	Basic experiments related to instrumentation used in the field of Mechanical Engineering; includes data collection and design of experiments.
ME	3100	Thermodynamics	3 Spring 2021	Elements of thermodynamics theory, system and control volumes, properties of pure substance, ideal gas, heat and work interactions, first and second laws, entropy.
ME	3102	Dynamic Systems II	3 Fall 2021	Free and forced vibration of one degree-of-freedom mechanical systems, response to harmonic excitation, general excitation, transient response, transfer function analysis, higher order systems including two degree-of-freedom systems and DC motors.
ME	3103	Dynamic Systems III	3 Spring 2021	Modeling of mechanical and electrical systems, feedback control systems with PID, analysis and design of transient and steady state response, stability analysis, root-locus technique, frequency domain analysis and design, state space methods.
ME	3300	Materials Science I	3 Spring 2021	Introduction to crystal structures, imperfections in solids, diffusion, mechanical properties of materials, dislocations and strengthening mechanisms, phase diagrams, structure and properties of ceramics and polymers, electrical properties.
ME	3333	Manufacturing Engineering	3 Spring 2021	Fundamentals of manufacturing including the relation among materials, structures, properties, and manufacturing processes, manufacturing economics, traditional manufacturing processes, and the new trend of advanced manufacturing such as 3D printing and na
ME	3402	Solid Mechanics & Design I	3 Fall 2021	Stress, strain, stress-strain relations, strain gauges; stress analysis; static failure; fatigue failure; design projects.
ME	3403	Solid Mechanics & Design II	3 Spring 2021	Design and analysis of machine elements; wear; torsion of noncircular sections; computer aided engineering; design projects.
ME	3600	Fluid Mechanics	3 Fall 2021	Fluid properties, fluid statics; kinematics of flow; conservation of mass, energy, momentum; dynamic similarity; fluid resistance, boundary layer theory; flow in conduits; lift and drag; potential flow; compressible flow.
ME	3900	ME Laboratory II	1 Spring 2021	Test of engineering materials, experiments related to basic stress analysis, thermodynamics and materials science.
ME	3950	Heat Transfer I	3 Fall 2021	Steady state, unsteady state conduction in one & two dimensions; numerical methods of solution; forced & free convection in internal & external flow; heat exchangers; multi-mode heat transfer.
ME	4001	Dynamic Systems Lab	1 Fall 2021	Laboratory experiments in data acquisition, measurement and characterization of dynamic systems, vibration, smart actuators, and real-time control.
ME	4002	Solid Mechanics Lab	1 Fall 2021	Laboratory experiments in structure, properties and mechanics of materials.
ME	4003	Thermal Fluids Lab	1 Fall 2021	Laboratory experiments in thermodynamics, fluid mechanics, heat transfer, aerodynamics, engine performance, and energy conversion.

ME	4850	Thermal-Fluid System Design	3	Spring 2021	Integration of thermodynamics, fluid mechanics and heat transfer and application to thermal designs. Characteristics of applied heat transfer problems: nature of problem specification, incompleteness of needed knowledge based and accuracy issues.
ME	5000	Selected Topics in ME	3	Spring 2020	(Technical Elective) Individual study of a selected topic with an ME faculty; requires exams/homework/projects similar to a regular course. Consent of department chair required.
ME	5001	ME Undergraduate Research I	3	Fall 2021	(Technical Elective) Individual participation in modern computational, analytical or experimental research activities under faculty supervision; requires technical report and presentation at end of semester. Consent of department chair required.
ME	5002	ME Undergraduate Research II	3	Fall 2021	Individual participation in modern computational, analytical or experimental research activities under faculty supervision; requires technical report and presentation at end of semester. Consent of department chair required.
ME	5005	Capstone Design I	2	Fall 2021	Product design; durability, economic, safety, ethical and environmental considerations; robust and quality design; decision-making, planning, scheduling and estimating; design proposal.
ME	5006	Capstone Design II	2	Spring 2021	Continuation of ME 5005; product design; design review process; oral presentation of design projects; final written report. Must be taken the semester following ME 5005.
ME	5101	Elements of Aerodynamics	3	Fall 2021	The standard atmosphere, two-dimensional incompressible flow, Reynolds and Mach number, generation of lift based on airfoil and wing platform characteristics, drag force, propulsive force, overall airplane performance, static stability and control.
ME	5102	Compressible Fluid Flow	3	Spring 2021	Foundations of fluid dynamics, isentropic flow, normal shock waves, flow in constant-area ducts and friction, flow with heat exchange, unsteady flow.
ME	5130	Intro to Sustainable Energy	3	Fall 2021	Technical aspects of sustainable energy technologies such as wind, solar, biomass, ocean waves/tides, geothermal, and hydropower. Issues related to storage, transportation, distribution, industrial usage, and buildings; progress, challenges, and opportuni
ME	5140	Design of Gravity Water Ntwrks	3	Fall 2016	Analysis and design of pipelines, tanks, valves, and other components in a gravity-driven water network; optimization of networks, hydroelectric power generation, and cultural and organizational issues.
ME	5155	Constructal Theory&Design	3		Basic principles of fluid mechanics, heat transfer and thermodynamics; internal spacing for natural and forced convection; tree networks for fluid flow; multiscale configurations for heat transfer, multi-objective configurations; vascularized materials: m
ME	5201	Intro to Finite Elements	3	Fall 2021	Basic concepts of finite-element method, method of weighted residuals, 1-D axial and beam elements, 2-D stress and thermal elements, design projects via commercial codes.
ME	5205	Flight Dynamics	3	Spring 2021	Static stability and control of aircraft; equations of unsteady motion; stability derivatives; uncontrolled longitudinal and lateral motion; open loop control mechanisms; closed loop control concepts.
ME	5206	Aircraft Design	3	Spring 2021	An integrated study of aerodynamics, propulsion, dynamics and control, structures, aeroelasticity, and performance with the purpose of a design of an aircraft that meets the desired specifications. Topics include weight estimates, sizing, configuration I
ME	5207	Orbital Mechanics	3	Fall 2021	Study of two-body problems with applications to geocentric orbits and interplanetary transfers. Topics include central force motion, Kepler's Law, orbit determination and maneuvers, Hohmann transfer and interplanetary trajectories.
ME	5411	Mechatronics	3	Spring 2021	Introduction to mechatronics, mechatronics components, its working principle and governing models, digital and analog electronics, mechatronic actuators, micro-controllers, sensors, modeling mechatronic systems, and case study. Senior standing.
ME	5421	Introduction to Robotics	3	Fall 2021	Basic principles of robotics; kinematic and dynamic concepts; actuators, sensors and practical issues; forward and inverse kinematics and dynamics of simple robotic arms; kinematics and dynamics of wheeled robots; alternative locomotion for mobile robots.
ME	5441	Advanced System Modeling	3	Fall 2021	Lumped-parameter modeling of multiphysics dynamic systems, with examples from bioengineering and mechatronics; unified network thermodynamics approach using bond graph techniques to analyze interactions between mechanical, electrical, fluid, or thermal do
ME	5500	Biomechanics	3	Fall 2021	An introductory survey of topics from the field of biomechanics, such as joint mechanics, cellular mechanics, biomaterials, and prosthetic devices.
ME	5600	Engineering Economics	3	Spring 2021	Concepts and analytical techniques of engineering economics: engineering costs, cost estimating, discounted cash flows, rate of return, cost/benefit analysis, risk analysis, and impacts of certain macroeconomics factors. Focus is on the economic viability
MET	1221	Severe & Hazardous Weather	3	Fall 2021	This introductory meteorology course covers the fundamentals of meteorology with emphasis on severe and hazardous weather and effects of these on human life, environment and the economy. Severe storms that include tropical cyclones (hurricanes), extrat
MET	1222	Climate Change:Past & Present	3	Spring 2021	Earth's climate and climate changes. Past climates (Paleoclimatology), major Ice Ages over the last billion years, methods for reconstructing past climates, including radio isotopic techniques. Fossil, geological, sedimentary, flora and fauna and document
MGT	1102	Management Essentials	3	Fall 2018	Introduction to organizational structures and functions; management processes and behavior of individuals and groups in organizations.

MGT	2153	Intro Human Resources	3	Spring 2019	Role of Human Resources Management in corporate strategy and success. Staffing, compensation, work design, performance measurement, individual and career development, safety, health, and separation. Focus on HR as critical success factor in organizations.
MGT	2155	Organizational Behavior	3	Spring 2021	Human behavior in organizations; research and theoretical writing on organizational behavior; case discussions. Junior or senior standing.
MGT	2206	Management Practice	3	Spring 2021	Application of management theory to problem identification and solutions. Motivation, leadership, discipline and shaping organizational cultures. Junior or senior standing.
MGT	2208	International Topics	3	Fall 2020	Examination of a specific international management topic, which may vary from semester to semester, as reflected in the course title (e.g., Internat'l Top: Mgt in Europe). Can be used toward the elective course requirement for the VSB IB Co-Major and IB M
MGT	2350	Global Business Management	3	Fall 2021	An elective topic dealing with the cross-cultural aspects of management. Student cases will address how politics, religion, social customs, and history shape and influence management practices. Junior or senior standing.
MGT	2352	Business in Emerging Markets	3	Fall 2019	Focuses on management and strategy in "big emerging markets," like Argentina, Brazil, China, India, Malaysia, Mexico, Poland, South Africa, Taiwan, and Turkey. Examines social, political, economic, cultural, and financial conditions challenging businesses
MGT	2360	Global Leadership	3	Fall 2021	Help students gain insights about the nature of culture, the nature of leadership, and their intersection. Provide students with an increased understanding of, (1) existing theory and research on different leadership and culture topics and, (2) themselves
MGT	2370	Global Business Ethics	3	Spring 2021	Interactive study of business ethics within a global economy. Alternative ethical theories across and within different cultures are presented. Both Western and non-Western traditions are explored to develop a framework useful to address ethical challenges
MGT	2400	Mgt of Creativity & Innovation	3		Develops students' awareness and confidence to innovate. Value of creativity tools and techniques for individual and group innovation. Students develop their own preferred creativity process and apply to individual and group challenges. Study innovation p
MGT	3070	Solving Complex Bus Problems	3	Fall 2021	Explores solving complex business problems. Focus is on developing tools, techniques, and methodologies used in the consulting industry.
MGT	3080	Management Consulting Practicu	3		Focuses on application of consulting practices through a hands-on, practical consulting experience working with an organization/live client.
MGT	3170	Data Mining	3	Fall 2021	The process of exploring and modeling large amounts of data to uncover previously unknown patterns. Using data mining techniques, managers can exploit large databases, identifying useful patterns to help make business decisions. Applications to marketing,
MGT	3300	Business Analytics Internship	3	Fall 2021	Employment with approved business firm where business analytics experience is gained through appropriate training, instruction, and supervision. Department chair approval required.
MGT	3310	B.A. Internship	3	Summer 2021	Employment with approved business firms where various meaningful assignments are performed with appropriate training, instruction, and supervision. Department chair approval required.
MGT	3320	Ind Study - Management	3	Fall 2021	Study with faculty member's guidance and approval in area of special interest to student. Department chair approval required.
MGT	3340	Ind Study-Internatl Busn	3	Fall 2021	Study with faculty member's guidance and approval in area of special interest to student. Department chair approval required.
MGT	3350	Ind Study Small Business	3	Spring 2021	This independent study will help students understand the environment and significance of small business in the economy. Problems in starting a small business and factors that contribute to success or failures. Department chair approval required.
MGT	4132	Seminar in Management	3		Study of selected topics in Management including discussion and lecture materials prepared and presented by individual students. Topics to be announced each semester, when seminar is offered.
MGT	4170	Advanced Analytics	3	Fall 2021	Covers how managers use advanced business analytics tools to support tactical and strategic business decisions. Covers applications of advanced business analytics techniques that support cross-functional decision making using software packages (for exampl
MIS	2020	Prog for Adaptive Prob Solving	3	Fall 2021	Explores a problem solving methodology that employs programming. Emphasis upon identifying capabilities and limitations of the programming approach. Learn skills and techniques to define business problems, design solution processes, develop program spec
MIS	2030	Database Management	3	Fall 2021	Theoretic and practical issues related to the management of a data base in a business environment including: the role of databases and database applications in contemporary organizations; data modeling using entity-relationship models; fundamentals of th
MIS	2040	Systems Analysis & Design	3	Fall 2021	Concepts, tools and techniques in the analysis and design of computer-based information systems; major issues and decision making in each phase of the development life cycle, application of creativity and innovation to the practice of systems analysis and
MIS	3020	Enterprise Systems & Appl	3	Fall 2021	Management and development enterprise computing concepts and applications in today's organization; integration of information systems in real time for support of internal functions; integration of different E-Commerce front ends with the Enterprise Resour

MIS	3030	Enabling Tech in E-Business	3	Spring 2020	Introduces theory, techniques, and tools needed to build successful E-business applications. It includes a survey of business web applications and their underlining technologies. Students learn to use client-side and server-side techniques, such as JavaS
MIS	3050	CRM and Data Analytics	3	Spring 2021	Fundamental issues associated with Customer Relationship Management (CRM) and Data Analytics, theoretical and practical, such as designing and building a data warehouse, building and populating info-cubes, report generation with SAP BW, data mining, busin
MIS	3060	Bus Intelligence and Perf Mgmt	3	Fall 2021	Examines concepts, processes, and tools related to business intelligence and performance management; learn systematic approaches for identifying business metrics and key performance indicators (KPI); apply data visualization techniques to develop interact
MIS	3070	Emerging Business Technologies	3	Fall 2021	This course focuses on the emerging and disruptive business technologies - like augmented reality, intelligent systems, Internet-of-Things and location-based services - likely to impact current and future business models and processes the most.
MIS	3080	Applied Machine Learning	3		Covers use of machine learning algorithms in business decision making and ethical challenges. Involves data preparation & pre-processing, coding and implementation of ML models including regression, forests, nearest neighbor dimensionality reduction along
MIS	3090	Special Topics in MIS	3	Spring 2021	Study of selected topics in MIS. Topics to be announced each semester when the special topics course is offered.
MIS	3300	AI & Machine Learning for Bus	3	Fall 2021	This course will examine how AI/ML applications in areas such as natural language processing, expert systems, deep learning, vision, speech, planning, and robotics, among others will impact business functions. Will also cover predominant AI/ML platforms a
MIS	3310	MIS Internship	3	Fall 2021	Employment with approved business firms where various meaningful assignments are performed with appropriate training, instruction, and supervision.
MIS	3331	MIS Independent Study	3	Spring 2021	Study with faculty member's guidance in area of special interest to student.
MIS	3500	MIS Co-Op	6	Fall 2021	Full-time employment with an approved firm in the area of MIS where experience is gained through appropriate training, instruction, and supervision. Course does not fulfill the requirements of the major. Prerequisite: MIS major with junior status; mini
MKT	1137	Principles of Marketing	3	Spring 2021	Description and evaluation of the ways in which goods and services are developed to meet customer and consumer needs and distributed for domestic and international consumption; economic, government, social, and other environmental forces in relation to th
MKT	2120	Buyer Behavior	3	Fall 2021	Development and attainment of organizational goals within the framework of human behavior and its relationship to marketing. Theory from psychology, sociology, and social psychology, with emphasis on application to marketing problems in consumer and indus
MKT	2197	Marketing Research	3	Fall 2021	The principal internal and external procedures used in collecting, processing, and evaluating both quantitative and qualitative data; research design; management of information for decision making.
MKT	2220	Integrated Marketing Communica	3	Fall 2016	Management of marketing communications within organizations; role of marketing communication for branding; understanding environments for marketing communications; development of messaging and media channels; assessment of the impact of the integrated mar
MKT	2224	Professional Selling	3	Fall 2021	Stresses skills and professionalism required in intensely competitive selling environments in global markets. This courses concentrates on complex consultative selling processes required in business-to-business relationships.
MKT	2225	Business Development Ldrship	3	Spring 2021	Policies and procedures for managing a business development organization; the role and characteristics of the business development function; techniques for selecting, training, supervising, and evaluating business development personnel including ethical a
MKT	2230	Marketing of Services	3	Spring 2017	Application of marketing principles to service organizations; differences between goods and services marketing and how these differences influence marketing strategy and the tactical design of the marketing mix variables.
MKT	2240	Marketing Analytics	3	Fall 2021	Covers analytics skills necessary for marketing decision making; adds experience with SAS JMP, Google Analytics and Adwords (certifications earned in course), advanced Excel functionality, and other analytical techniques to reflect marketplace changes.
MKT	2280	Global Marketing	3	Fall 2020	The world market and its implications for global marketing; the relationships of imports and exports to policies; impacts of major national cultures on foreign marketing communications and business development programs will be researched through multiple
MKT	2285	Social Media Marketing	3	Fall 2021	Understand social media interactions, examine the various social media channels available to marketers, learn how to build social marketing strategies, and practice how to track their effectiveness.
MKT	2290	Digital Marketing	3	Fall 2021	Covers digital marketing skills: search engine optimization (SEO), search engine marketing (SEM), e-mail, Social Media, and Mobile marketing. Uses on-line simulation to develop SEM skills.
MKT	2349	Cont. Topics in Marketing	3	Fall 2020	Contemporary issues and topics which affect a firm's marketing strategies.
MKT	2375	Marketing Management	3	Fall 2021	Analytic procedures to understand and integrate effective policies applied to demand, product research, channel selection and development, promotion, and pricing on both domestic and international levels; concentration on decision making.

MKT	3350	Independent Study - Marketing	3	Fall 2021	Independent study under faculty guidance in an area of student's special interest.
MKT	3450	Internship Marketing	3	Fall 2021	Employment with approved firm where varied Marketing experience is gained with appropriate training, instruction and supervision. Junior/senior standing and GPA GE 2.5.
MKT	3470	Marketing Co-Op	6	Fall 2021	Full-time employment with an approved firm in the area of marketing, where experience is gained through appropriate training, instruction, and supervision. Does not fulfill requirement for major. Minimum gpa will vary.
MKT	4132	Seminar in Marketing	3	Spring 2017	Study of elected topics in Marketing including discussion and lecture materials prepared and presented by individual students. Topics to be announced each semester, when seminar is offered.
MS	0101	Army Critical Thinking Intro	1	Fall 2021	Introduces students to the personal challenges and competencies that are critical for effective leadership and communication. Students learn how the personal development of life skills such as cultural understanding, goal setting, management, stress manag
MS	0102	Adaptive Ldrsp & Prof Competen	1	Spring 2021	Introduces students to the professional challenges and competencies that are needed for effective execution of the profession of arms and Army communication. Through this course, students learn how Army ethics and values shape their Army and the specific
MS	0201	Foundations of Leadership	2	Fall 2021	Students explore the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and two historical leadership theories that form the basis of the Army leadership framework. Aspects of personal motivation and
MS	0202	Found. of Tactical Leadership	2	Spring 2021	Students examine the challenges of leading teams in the complex operational environment. The course highlights dimensions of terrain analysis, patrolling, and operation orders. Further study of the theoretical basis of the Army Leadership Requirements Mod
MS	0301	Traing Mgmt & Warfighting Func	3	Fall 2021	Students study, practice, and apply the fundamentals of Army Leadership, Officership, Army Values and ethics, personal development, and small unit tactics at the team and squad level. At the conclusion of this course, students are capable of planning, coo
MS	0302	Applied Ldrshp Small Unit Op	3	Fall 2021	Students study, practice, and apply the fundamentals of Army Leadership, Officership, Army Values and Ethics, Personal Development, and small unit tactics at the platoon level. At the conclusion of this course, students will be capable of planning, coordi
MS	0401	Mission Command & Army Prof.	3	Fall 2021	Students explore the dynamics of leading in the complex situations of current military operations. They examine differences in customs and courtesies, military law, principles of war, and rules of engagement in the face of international terrorism. They al
MS	0402	Mission Comm. & Co. Grade Offi	3	Spring 2021	Students explore the dynamics of leading in the complex situations during Unified Land Operations I, II, and III. They examine the Art of Command and how to properly communicate with their NCOs and Soldiers during Taking Charge 1, 2 and 3, and Developing
MSA	1000	Online MSA Orientation		Fall 2020	This course provides an introduction to online learning and the necessary knowledge and skills required to complete courses in the blackboard e-learning environment.
MSE	2100	AST:Birth and Death of Stars	3	Summer 2021	A study of the fundamental properties of the Sun and stars. The formation of stars, their energy generation, evolution, and death - leading to the formation of exotic new objects such as white dwarfs, neutron stars, and black holes.
MSE	2101	AST:Life in the Universe	3	Fall 2021	A study of the origin and evolution of life on Earth and the possibilities of life in the Solar System and among the stars. The conditions leading to planetary habitability and how life outside the Solar System might be detected.
MSE	2102	AST:Planetary Skies/Landscapes	3	Fall 2021	A study of our own and other Solar Systems, including formation and evolution. The physical properties which shape planetary interiors, surfaces, and atmospheres. The Earth is studied in the context of the other planets, and its unique properties are exam
MSE	2103	AST:How Old is the Universe	3	Spring 2021	How we know the Universe is 13.7 billion years old? Includes evidence from the Solar System, the oldest stars seen in the Milky Way galaxy, and the observed expansion of the Universe itself. Evolution and fate of the Universe.
MSE	2104	AST:Earth-Our Habitable World	3	Fall 2021	Explores the Earth as our home and as a laboratory for understanding the scientific method. The characteristics, dynamics, and evolution of the Earth. Leads to the discovery and understanding of the fundamental scientific principles at work on our home wo
MSE	2105	AST:Earth-A Cosmic Connection	3	Spring 2021	Explores the Sun and the stars - our ultimate sources of energy and the chemical elements. Characteristics, dynamics, and evolution of the Sun and the stars. The discovery and understanding of the fundamental scientific principles at work throughout the u
MSE	2150	AST:Astronomy Lab - Planets	1	Fall 2021	1-cr laboratory course focusing on planetary astronomy. To be taken as a co-requisite with MSE 2101 "Life in the Universe" or MSE 2102 "Planetary Skies and Landscapes".
MSE	2151	AST:Astronomy Lab - Stars	1	Summer 2021	1-cr laboratory course focusing on stellar and galactic astronomy. To be taken as a co-requisite with MSE 2100 "Birth and Death of Stars" or MSE 2103 "How Old is the Universe?".
MSE	2152	AST:Our Habitable World Lab	1	Fall 2021	1-cr laboratory course to be taken as a co-requisite with MSE 2104 "Earth: Our Habitable World".
MSE	2153	AST:A Cosmic Connection Lab	1	Spring 2021	1-cr laboratory course to be taken as a co-requisite with MSE 2105 "Earth: The Cosmic Connection".

MSE	2200	BIO:Behavioral Bio of Animals	4	Fall 2021	Mechanisms, evolution, and consequences of animal behavior, including how genes and environment affect behavior, learning and animal consciousness, role of hormones, predator-prey interactions, visual and auditory communication, courtship/mate choice, and
MSE	2201	BIO:How Microbes Rule World	4	Spring 2020	Overview of microbiology, illustrating the roles of bacteria, viruses, fungi, algae and protozoa in our food, environment, and health. Lectures and labs cover microbe classification, control of microbial growth, roles of microorganisms in agriculture, eco
MSE	2202	BIO:Biological and Politics	4	Spring 2020	Examination of importance of science and technology in contemporary political issues such as alternative energy, global climate change and evolution. Scientific method and biological principles important in objective, evidence-based explanations examined
MSE	2203	BIO:Heredity & Human Affairs	4	Fall 2021	Overview of genetic topics and their social/ethical impacts, including genetic engineering, assisted reproduction, artificial wombs, Human Genome Project, cloning, fetal stem cells, gene therapy, and chromosomal abnormalities and disorders. Includes lectu
MSE	2204	BIO:Human Physiol-Body Works	4	Summer 2021	Principles and mechanisms underlying how the human body functions, with emphasis on physical fitness. Includes lectures, discussions, and labs.
MSE	2205	BIO:Biodiversity& Conservation	4	Spring 2021	Examination of challenge of balancing needs of an ever-growing human population while maintaining a healthy environment. Covers importance of biodiversity to both humans and proper functioning of earth, and discusses methods of effective conservation. Inc
MSE	2206	BIO:Biotechnology in Our Soc.	4	Fall 2021	Overview of revolutionary role of biotechnology in our society, including manipulation and analysis of DNA, transfer of genetic information, and use of computers in bioinformatics. Lectures and laboratory include recombinant DNA technology, gel electropho
MSE	2207	BIO:Organisms in Changing Envr	4	Fall 2021	Exploration of effect of environmental factors (temperature, precipitation, ocean currents, humidity, wind) on physiology, distribution, and interactions of organisms in different ecosystems, as well as the longer term effects of climate change on biodive
MSE	2208	BIO:Cancer Chronicles	4	Fall 2020	Overview of cancer, including its causes and how it is studied, evaluated, and treated. With one half of men and a third of women developing cancer, also covers importance of cancer in both socioeconomic and health terms. Includes lectures and labs.
MSE	2210	Drugs:How they Work,Caution!	4	Summer 2021	How drugs work and why they should be taken with caution. Topics include: drug treatment of major illnesses; causes of drug toxicities/addiction; the actions of performance enhancing drugs; and influence of drugs on society.
MSE	2211	BIO:Vaccines&Public Perception	4	Spring 2021	Overview of vaccine science and pathogens, including how the history of vaccines, anti-vaccine movements, and social contexts play integral roles in public perception. Laboratory topics include an inquiry-based progression through vaccine design and stude
MSE	2212	Genealogy - All In Your Family	4	Fall 2021	Methods for constructing family trees from DNA tests, including student's own, and vital records. Biological basis of heredity; applications in evolution, behavior, and conservation. Interdisciplinary consideration of contexts concerning ancestry.
MSE	2300	CHM:Alchemy, Artisanhip& Chm	4	Spring 2021	This course examines introductory chemistry topics in a modern and historical light including how the current knowledge of chemistry is owed to Greek philosophers, Islamic healers, Western artisans, monks, and the alchemists. The laboratory recreates chem
MSE	2301	CHM: Water	4	Fall 2021	The course explores the chemistry of water including its unique structure and properties, water pollution, water treatment, and its role in biochemistry, climate, renewable energy, and global economic and political policies. The laboratory introduces samp
MSE	2303	CHM:The Science of Art	4	Summer 2021	This course provides an understanding of artistic media related to technological advances throughout the centuries. Creating, viewing, and understanding, authenticating, and conserving works of art will be explored. The laboratory provides practice and an
MSE	2304	CHM:Our Energy Future	4	Spring 2019	An introduction to the science of energy principles and issues. Lecture and Laboratory provide context and practice with modern examples.
MSE	2305	Perspective on Plastic	4	Fall 2020	Polymers surround our everyday existence from the clothes we wear to the plastic packaging we use to polymers in wood. Using an interdisciplinary approach, we will study polymer lifecycles to help inform and shape responsible plastic use.
MSE	2400	CSC:Evol Lrng Cmp Robtcs Agnts	4	Fall 2021	This course explores how software designers and artificial intelligence researchers draw inspiration from biology and learning theory to design programs and robotic agents that learn and adapt to changes in their environment. No prior programming experien
MSE	2500	GEV: Env. Sustainability	4	Fall 2017	Challenges and complexities involved in achieving a sustainable society. Interdisciplinary approach to investigating impacts of a growing human population on energy requirements, waste management, and natural resource use.
MSE	2501	GEV: Our Warming Planet	4	Spring 2021	Climate change, past and future climate, impacts of climate change on the natural world and human society, and adaptation strategies. Laboratory work focused on applying the scientific method to understanding causes and consequences of climate change.
MSE	2502	GEV: Climate, Env., & Society	4	Spring 2019	Science of meteorology, climatology, and how variations in climate affect periodic ecological cycles. Focus on connections between them and overall trends in environmental change. Laboratory work focused on applying the scientific method to climate and en

MSE	2505	GEV: Wetlands	4		Wetlands improve the environment in ways society is only beginning to understand. Today, scientists realize their importance in providing vital habitat. Examination of how they affect our daily lives, their value to society, and current regulations.
MSE	2506	GEV:Energy Extraction from Env	4	Spring 2018	Extraction and use of fossil fuels is linked to global economics and to multiple environmental issues. Newly developed techniques such as hydro-fracking have recently allowed for the production of natural gas from shale deposits in the U.S. Focus on the
MSE	2507	GEV:Environmental Pollution	4	Fall 2021	Scientific principles, concepts, measurements, and case studies with a focus on the science of environmental pollution (air, water, and land). Global climate change, environmental sustainability, environmental justice, and environmental policies.
MSE	2602	PHY:40% Solution: Light/Sound	3	Spring 2021	Reflection, Refraction, Mirrors, Lenses; Interference and Diffraction; Light and our Atmosphere; Electromagnetic Radiation; Light Waves and Photons; Waves and Sound; Standing Waves; Music and Harmonics; Doppler Effect.
MSE	2603	PHY:Big Bang: Forces/Particles	3	Fall 2021	The Creation; What is Science?; Heliocentric System; Gravity on Earth; Newton's Laws; Gravity in the Universe; The Atom and Nucleus; Electromagnetic Forces; Strong Nuclear Force; Radioactivity; Elementary Particles; Standard Model; Anthropic Principle.
MSE	2604	PHY:The Physics of Sports	3	Fall 2021	An examination of the underlying physical principles governing sports, with exploration of such questions as how curve balls curve, why golf balls have dimples, and why sailboats can sail almost directly into the wind.
MSE	2652	PHY:40% Solution Lab	1	Spring 2021	Experiments to accompany MSE 2602.
MSE	2653	PHY: Big Bang Lab	1	Fall 2021	Experiments to accompany MSE 2603.
MSE	2654	PHY:The Physics of Sports Lab	1	Fall 2021	Experiments to accompany MSE 2604.
MSE	2701	PSY:The Sounds of Human Lang.	4	Fall 2020	Sounds of spoken language and how they are perceived by human listeners including speech production and perception, phonetics, and language development and disorders. Laboratories include acoustic analysis, experimental design, hypothesis testing, and dat
MSE	2702	PSY:Neuroscience of Sleep	3	Fall 2021	Neuroscience of Sleep.
MSE	2752	PSY:Neuroscience of Sleep Lab	1	Fall 2021	Neuroscience of Sleep Lab.
MSE	2900	MSE: Topics	4	Spring 2018	
MSF	1000	Corp Fin Boot Camp		Fall 2021	Corp Finance Book Camp
NS	0100	Naval Professional Lab		Fall 2021	Military drill, information briefings, and seminars on various subjects of USN/USMC interest including naval orientation (freshman), naval warfare specialties (sophomores), navigation laboratory (juniors), career planning and pre-commissioning information
NS	1000	Intro to Naval Science	2	Fall 2021	Course is an introduction to the naval profession and to the concepts of seapower. The mission, organization, and warfare components of the Navy and Marine Corps, including an overview of officer and enlisted ranks, rates, and career patterns; naval cou
NS	1050	Naval Science Orientation	0		Naval Science Orientation.
NS	1100	Seapower and Maritime Affairs	3	Spring 2021	Naval history from the beginnings of the age of sail through the twentieth century. The works and influence of Alfred Thayer Mahan as they relate to current and past fleet doctrine. The impact of foreign nations' maritime activities on world seapower.
NS	2100	Naval Ships Systems I	3	Fall 2021	Construction and propulsion of naval ships, including design, stability, control of damage. Propulsion systems including steam, diesel, gas turbine, nuclear power plants; shipboard electrical power generation and distribution; and shipboard auxiliary sys
NS	2200	Naval Ships Systems II	3	Spring 2021	Introduction to naval weapons systems including basics of radar, sonar, and gyroscopes; weapons systems analysis stressing the fire control problem, information flow, the servo principle, and use of computers; general operation, safety and maintenance of
NS	3100	Navigation	3	Spring 2021	The theory and technique of piloting and celestial navigation. Normally taken by juniors.
NS	3200	Naval Operations	3	Fall 2021	The maneuvering board, tactical communications, rules of the road, and seamanship. juniors.
NS	3500	Evolution of Warfare	3	Spring 2020	The evolution of weapons, tactics, and military organization applicable to land operations; the classic principles and variables of land operations.
NS	3600	Fundamntls of Maneuver Warfare	3	Spring 2021	Introduces the student to the foundational concepts and history of the USMC as the premier Maneuver Warfighting Organization. Develops an individual who is both a critical thinker and scholar in the profession of arms.
NS	4100	Leadership and Management	3	Fall 2021	Fundamentals of leadership and management of an organization; emphasis on the Naval officer as leader and manager, concentrating on areas such as professional ethics, organizational theory, and the characteristics and roles of successful leaders. Normal
NS	4200	Leadership and Ethics	3	Spring 2021	Applications of the principles of leadership and management with a focus and emphasis on the military arena. Ethical and moral responsibility examined with emphasis on the interrelationship of authority, responsibility and accountability in an organizati
NTR	2120	Principles of Nutrition	3	Fall 2021	Principles of normal nutrition and the interrelatedness of economics, culture and health.

NUR	1102	Intro to Prof Nursing	2	Fall 2021	Core curricular concepts including professional values, evidence-based practice, patient centered care, clinical reasoning, therapeutic communication, patient safety and dignity, and scholarly analytical skills are addressed. Examines historical, current
NUR	1104	Intro to Prof Nursing Practice	2	Fall 2021	Examines professional nursing in the context of health care from national and global perspectives. Relationship of core curricular concepts to patient centered care is explored. Impact of healthcare planning, financing and delivery on nursing and global h
NUR	2200	Healthy Lifestyles & Human Val	3	Summer 2021	Exploration of real life issues of college students, with emphasis on personal decision making and values clarification. Substance use/abuse, sexuality, depression, STD/AIDS, stress management.
NUR	2204	Health Assessment	2	Fall 2021	Health assessment of individuals from birth through older adulthood, emphasizing the healthy adult. Health history and physical examination are discussed addressing evidence-based practice, clinical reasoning, genetics, genomics, culture, spirituality, hu
NUR	2205	Practicum in Health Assessment	1	Fall 2021	Students practice, in the laboratory setting, techniques of health assessment, including gathering health history, assessing body systems, documenting findings, and providing health teaching while incorporating concern for safety, privacy, and dignity wit
NUR	2206	Essentials of Nursing Practice	2	Fall 2021	Best practices in professional nursing applied to patient care skills, including safety, hygiene, activity, nutrition, elimination, sleep, oxygenation, and health education are discussed. Using health assessment and clinical reasoning, nursing interventio
NUR	2207	Practicum in Essen of Nsg Prac	2	Fall 2021	Practice of selected nursing and patient care skills in a variety of settings. Application of evidence-based nursing interventions to meet basic health needs of individuals in selected clinical settings is implemented.
NUR	2810	Resrch & Sci Evid in Nsg Prac	3	Fall 2021	Critically examines the use of scientific evidence in nursing practice with emphasis on the use of systematic scholarly inquiry and analytical skills. The process for discovering new scientific evidence across research paradigms and their associated metho
NUR	3000	Founda in Nur and Health	3	Summer 2018	Concepts from College of Nursing philosophy as a framework for professional nursing practice. Standards, guidelines, reports and studies that influence nursing practice and healthcare. Strategies for use of scientific evidence, analytical skills and sch
NUR	3007	Health Assessment	3	Summer 2018	Comprehensive nursing assessment of individual and families is emphasized. Opportunities to apply clinical skills such as interviewing, data collection, genograms and physical assessment are provided. Evidence-based tools are examined and used in completi
NUR	3030	Basic Conc Pharmacology	3	Fall 2021	A classification of pharmacological agents, their actions, dosages, toxicity and interactions related to the physiological variables and life-cycle.
NUR	3108	Pathophysiology	3	Fall 2021	Human pathogenesis from the cellular, histologic, and systemic perspectives. Emphasis on pathophysiology that is commonly experienced by the individual and frequently encountered in the clinical setting. The influence of etiologic agents, environment, a
NUR	3114	Nsg Care Adults & Older Adults	6	Fall 2021	Nursing care of adults and older adults with age-related acute and chronic health conditions. Ethical and holistic patient centered care focused on providing continuity of care to meet the needs of the patient and family across care settings.
NUR	3115	Prac Nsg Adults & Older Adults	6	Fall 2021	Clinical application of current evidence, therapeutic nursing interventions and principles of teaching-learning for patient centered care of adults and older adults. Continuity of care across care settings, including acute, chronic and community based cli
NUR	3118	Nsg Care Women & Childbear Fam	3	Fall 2021	Nursing care of women and childbearing families across the reproductive spectrum. Focuses on well women health and care of the childbearing family in wellness and in at risk situations, with an emphasis on improving the health of the family.
NUR	3119	Prac Nsg Women & Childbear Fam	3	Fall 2021	Clinical application of current evidence, clinical reasoning, nursing judgment and a public health focus when planning, implementing and evaluating patient centered care for women and childbearing families. Clinical practice settings include hospitals, bi
NUR	3120	Psychiatric & Mental Hlth Nsg	3	Fall 2021	Nursing care of individuals and families with psychiatric and mental health problems. Psychiatric nursing concepts from a biological, psychological, sociological, legal, ethical, policy and advocacy context are examined. Concepts of therapeutic communicat
NUR	3121	Prac Psych & Mental Hlth Nsg	3	Fall 2021	Clinical application of nursing interventions for patients, families and groups experiencing mental health issues in hospital and community settings. Focused on integration of concepts of culture, ethnicity, spirituality, genetics/genomics, family and dev
NUR	3122	Imper for Global & Pub Health	3	Fall 2021	Factors that influence the health of communities and populations locally, nationally and globally. Public health principles and sciences, epidemiological data, environmental health, social determinants of health, genetics/genomics, influence of culture an
NUR	4104	Nsg Adults w Comp Hlth Prob	3	Fall 2021	Nursing care of acutely ill adults and older adults with complex health problems. Restoration, maintenance and promotion of health for acutely ill adults and older adults and continuity of care within specialized settings and across care settings is empha

NUR	4105	Prac Adults w Comp Hlth Prob	3	Fall 2021	Clinical application of clinical decision making skills, clinical reasoning and nursing judgment in caring for adults and older adults with complex health problems. Focus is on provision of evidence based, patient centered care, patient safety, dignity an
NUR	4108	Nsg Care Child & Adol	3	Fall 2021	Nursing care of children, adolescents and families in community based and acute care settings. Emphasis is placed on family, social, cultural, religious and developmental factors on health promotion for well, acutely ill and chronically ill children and a
NUR	4109	Prac Nsg Care Child & Adol	3	Fall 2021	Clinical Application of clinical decision making, clinical reasoning and nursing judgment in caring for children, adolescents and families in acute care and community based settings. Focus is on providing evidence based, patient centered care to maintain,
NUR	4112	Health Prom & Home Health	3	Summer 2021	Nursing care for individuals, families, communities and populations. Emphasis is placed on designing, implementing and evaluating population based interventions to promote health. Consideration is given to populations experiencing chronic health problems
NUR	4113	Prac Health Prom & Home Health	5	Summer 2021	Clinical application of evidence based nursing care in community based settings that provide home care or ambulatory care for individuals, families, communities, and populations of all ages. Application of health promotion strategies for populations to ma
NUR	4114	Nursing and Health Policy	2	Fall 2021	Impact of health policy, health care financing and economics, legislative and regulatory authority on nursing practice and the health care delivery system. Societal and professional issues influencing nursing practice and the nurse as an active participan
NUR	4116	Leadership & Management	2	Summer 2021	Principles of leadership, management and organizational processes in nursing practice and in health care systems. Nursing's responsibility for quality, patient safety, professional values, accountability, and interprofessional collaboration is emphasized.
NUR	4117	Fld Work Leadership & Mgmt	3	Fall 2021	Clinical application of principles of leadership and management and organizational processes in nursing practice. Field work experiences may include acute care, long-term care, home health, and community based settings.
NUR	4118	Cult Infl on Hlth Blf & Prac	3	Summer 2020	Cultural influences on health beliefs and practices are examined. Implications for providing culturally sensitive nursing care to diverse individuals, groups and communities are addressed.
NUR	4200	Seminars in Selected Topics	1	Fall 2021	Opportunity for focused study of selected topics, such as current issues and trends in nursing and healthcare.
NUR	4802	Issues Trend Gerontology	3		Aging and the effects of transitions associated with aging. Emphasis is on functional assessment, chronicity and the impact of demography. Open to nursing and other majors with interest in gerontology.
NUR	4900	Guided Study in Nursing	1	Fall 2021	Study or project development in a special interest area in nursing under faculty guidance. Includes tutorial sessions as necessary. Registration with the permission of the Dean.
NUR	4901	Guided Study in Nursing	2	Fall 2021	
NUR	4902	Guided Study in Nursing	3	Fall 2021	
NUR	4903	Guided Study in Nursing	4	Spring 2021	
NUR	4904	Guided Study in Nursing	5	Spring 2021	
NUR	4905	Guided Study in Nursing	6	Spring 2021	
ODM	1000	Foundation of Organiz Behavior	3	Fall 2021	Overview of the key principles and research of organizational behavior. Examines individual human behavior in the workplace as influenced by personality, values, perceptions, and motivations, and group behavior as related to collaboration, communication,
ODM	1100	Foundations of Strategic Mgmt	3	Spring 2021	Overview of key principles and practices of strategic management. Examines topics such as establishing mission, vision, and direction, evaluating environmental influences, assessing industry and market trends, building organizational culture, leading eff
ODM	2000	Essentials of Finance & Acct	3	Fall 2021	Introduction to basic standards and concepts underlying finance and accounting. Topics include balance sheets, income statements, cash flow statements, budgets, forcasts, and reporting.
ODM	2010	Foundations of Marketing	3	Spring 2021	Introduction to key concepts, terms, and strategies used in the marketing function of an organization. Focus is on understanding how firms and consumers behave and developing a tool kit of strategies and tactics to be used in promoting an organization's m
ODM	2020	Ethics, Regulations & Soc Resp	3	Fall 2021	Examines the intersection of ethics, regulation, and social responsibility, and the business management and strategy. Provide students with the opportunity to understand and analyze the economic, legal, political, ethical, and societal issues involving t
ODM	2030	Organizational Decision Making	3	Summer 2021	Explores decision-making philosophy, approaches, challenges, and best practices. Provides opportunities to analyze contexts that impact decision process and quality, and develop skills related to individual and organizational decision-making.
ODM	2040	Strategic Oper & Process Impro	3	Fall 2021	Introduces key components of operations management and strategy. Overview and analysis of tools, techniques, and methodologies of process improvement.
ODM	2050	Innovation & Creative Thinking	3	Spring 2021	The cultivation of innovation and creative thinking are essential to an organization's success in the 21st Century Global context. This course will examine how innovation and creativity can be facilitated, managed and sustained in a work setting. Students
ODM	5000	Organiz Devlp & Mgmt Capstone	3	Spring 2021	Integrates strategic management and organizational development tools and practices from throughout the curriculum to topics such as change management and entrepreneurship.

PA	1050	Public Administration	3	Fall 2021	Administrative politics, law, and ethics, organizational theory and technical fields, such as budgeting, planning, and personnel.
PA	2000	Public Policy	3	Fall 2021	Theories of public policy making, national public policies, and contemporary issues.
PA	2100	City and Suburb	3	Spring 2021	Politics and problems in metropolitan areas of the United States.
PA	3000	Overview of Non-Profit Sector	3	Fall 2021	Examination of the size, scope, central activities, and public impact of the nonprofit sector in the U.S. and abroad. Exploration of current trends and career opportunities in the nonprofit sector.
PA	4100	Public Budgeting	3	Fall 2021	How government and nonprofits raise revenue, engage in the budgeting process, and use budgets to manage in the public sector.
PA	4200	Organizational Development	3	Summer 2021	Evaluation of human capital initiatives, marketing and communication strategies, and service delivery in government and nonprofit organizations.
PA	5000	Special Topics	3	Spring 2018	Special topics in public administration.
PA	5100	Independent Study	3	Fall 2021	Individual students with specific interests in public administration work on a tutorial basis with an appropriate professor.
PA	6000	Vocation of Public Service	3	Summer 2021	The exploration of the concept of public service as a "vocation," envisioning public service as a means of self-expression through which citizen-servants discover meaning and purpose in their lives by promoting the common good and developing the bonds of
PA	6100	PSA Internship	3	Fall 2021	Supervised work opportunity to explore public service professional interests and gain experience in the public or nonprofit sector. Prerequisite: Approval from the Chair of the Department of Public Administration.
PHI	1000	Knowledge, Reality, Self	3	Fall 2021	Philosophical responses to the questions of how we can know, what is real, and what is the nature of human existence that explore the dialogue between Catholic, Christian, secular and skeptical perspectives on these questions.
PHI	1990	Topics	1	Spring 2021	One-credit course on variable topics; course meets for a minimum of 14 hours.
PHI	2010	Logic & Critical Thinking	3	Fall 2021	The study of logic and critical thinking. Topics include: argument identification and analysis; formal and informal logic; fallacies; inductive argument; the role of argumentative structures in various philosophical traditions.
PHI	2020	Symbolic Logic	3	Spring 2019	Propositional and first-order predicate logic; logical structure of arguments; symbolic languages; correct and incorrect inferences; fallacies; truth-tables; natural deduction.
PHI	2115	Ethics for Health Care Prof	3	Fall 2021	Rights and duties of the patient/client and the members of the health care team, death and dying, genetic engineering and manipulation.
PHI	2117	The Good Doctor	3	Fall 2021	The art and science, learning and dispositional attitudes necessary for the moral practice of medicine by a good doctor. Themes for the course drawn from philosophical resources, sociological theory, data and first-person medical narratives.
PHI	2121	Environmental Ethics	3	Fall 2021	The relation of the physical and biological environment to ethical values. Priorities among environmental, economic and political values as a basis for ethical decisions.
PHI	2130	Business Ethics	3	Spring 2019	Social justice and charity as principles of order in economic life and relationships: topics include consumer rights, corporate social responsibility, and ecology.
PHI	2155	Engineering Ethics	3	Spring 2020	Engineering ethics through case studies focusing on professional responsibility, the role of technology in society and a holistic evaluation of the purpose of science and engineering.
PHI	2160	The Ethics of War	3	Fall 2020	Just war theory, total war, nuclear deterrence and nuclear war, disarmament, genocide, war crimes and atrocities, terrorism, non-violent resistance, and pacifism.
PHI	2170	Mass Media Ethics	3	Fall 2016	The impact of the changing communications technologies on the human person and society; freedom of the press, violence; pornography and censorship, confidentiality of sources, advertising ethics and codes of ethics and standards of practice.
PHI	2180	Computer Ethics	3	Fall 2021	Codes of professional ethics, unauthorized access, ownership of software, and the social responsibility of computing professionals.
PHI	2190	Freedom	3	Spring 2018	Human freedom analyzed from a metaphysical and political perspective; readings from classical and contemporary sources on such topics as determinism, slavery, rights, authority and dissent.
PHI	2300	Philosophy of Law	3	Fall 2016	The nature and function of law, relation of law to ethics, the judicial process, the role of constitutions, the rights of citizens, law and international relations.
PHI	2400	Social & Political Phil	3	Fall 2021	Social and political philosophers and the influence of their theories on the philosophical foundation of modern culture and society; emphasis on such conceptions as society, the state, justice and equality, and the social and political nature of persons.
PHI	2410	Philosophy of Sex & Love	3	Fall 2021	Embodiment, the nature of sexuality, the types of love, sexual ethics, marriage, sexual differences, and sexual discrimination.
PHI	2420	Philosophy of Women	3	Fall 2021	Nature and status of women from ancient times to the present, with consideration of the more general context of self-identity; contemporary feminist theories; feminism as a political movement.
PHI	2450	Catholic Social Thought	3	Fall 2021	Catholic Social Thought from Rerum Navarum to the present. Its Aristotelean-Thomistic grounding. The Church's challenge to analyses of contemporary social, political, and economic systems.
PHI	2460	Globalization	3		Philosophical issues of globalization including: international law and human rights, immigration and migration, human trafficking, cyber solidarity, fair trade, poverty tourism, protest in the global civic sphere, and religious dialogue across borders.

PHI	2470	Irish Thought and Literature	3	Fall 2020	An examination of main thinkers in the Irish tradition; the relation of reason (science) and religion; the importance of poetry; themes to be explored include (e)migrant thought, exile and home, English as colonizers, language and voice, laughter and comedy
PHI	2480	Africana Philosophy	3	Fall 2021	Survey of theoretical writings and discourses by authors from Africa and the African diaspora at large, especially African-American and West-Indian authors.
PHI	2490	Latin Amer & African Amer Phil	3	Spring 2021	Colonialism and anti-colonial struggles, slavery and abolition, the Black and Latinx radical traditions, intersectionality and materialist critique, race/gender/sexuality/class relations, mass incarceration and detention, media and culture, liberation str
PHI	2500	Philosophy of Exchange	3	Spring 2021	Monetary exchange in philosophical perspective: money as a means and as an end; higher and lower forms of exchange; sacrificial economies; the politics of scarcity; sacred economics.
PHI	2550	Technology & Society	3	Spring 2021	Case studies of specific technologies (such as television, automobiles, health technology) and critical examination of ethical Philosophical and policy issues that these technologies raise.
PHI	2650	Philosophy of Sport	3	Spring 2019	Nature of play, sport and game with special emphasis on the role of sport in modern society.
PHI	2700	Philosophy of Science	3	Fall 2021	Philosophical implications of specific laws and theories; Newton's laws, energy, evolution, relativity, atomic theory. Methodological problems of observation, discovery, testing; scientific realism, revolutions in scientific thought.
PHI	2710	Information Knowledge Inquiry	3	Fall 2019	The nature of human knowledge; sources of knowledge; justification of belief; conduct of inquiry; information; scientific reasoning; testimony; ecological rationality; and technologically extended knowledge.
PHI	2760	Philosophy & Literature	3	Fall 2020	Philosophical ideas in selected literary works; examination of the relation of literature to philosophy; fiction and truth, modes of communication.
PHI	2900	Philosophy of Religion	3	Spring 2021	The meaning of God, the experience of the Divine, nature of revelation, negative theology, the absence of God.
PHI	2930	Indian Philosophy	3	Spring 2020	Introduction to basic traditions of Indian philosophy; exploration of debates between these traditions on fundamental issues of epistemology metaphysics, and philosophy of religion.
PHI	2940	Indian & Tibetan Buddhist Phil	3	Fall 2021	An exploration of fundamental problems, traditions, and themes in Buddhist philosophy as developed in India and Tibet.
PHI	2990	Topics in Philosophy	3	Fall 2021	
PHI	2993	Internship	3	Fall 2021	Departmentally related and academically creditable field work experience. See department chair for more information. Permission of Department Chair required.
PHI	2996	Internship	6	Summer 2021	Departmentally related and academically creditable field work experience. See department chair for more information.
PHI	3020	History of Ancient Philosophy	3	Fall 2021	Plato, Aristotle and selected pre-Socratic and Hellenistic philosophers in the context of ancient and classical Greek civilization.
PHI	3030	History of Medieval Philosophy	3	Fall 2021	Philosophical movements from the early Middle Ages to the rise of modern philosophy; the influence of later Medieval speculation upon thinkers of the modern period; readings from Augustine, Aquinas, Bonaventure, and others.
PHI	3040	Hist of Early Mod Philosophy	3	Spring 2021	The systems of Descartes, Spinoza, Leibniz, and the empiricists - Locke, Berkeley, and Hume; Kant; selections read and evaluated.
PHI	3050	Kant & 19th Cent Philosophy	3	Fall 2021	
PHI	3100	Augustine & Antiquity	3	Spring 2021	Life and thought of Saint Augustine; the problem of certitude, the problem of evil, the nature of history, human knowledge and God, the soul-body relations, and political philosophy.
PHI	3120	Augustine & Modernity	3		Influences of Augustine's major teachings in shaping medieval and modern thought. Augustine's position on human nature, human freedom, sin and grace, history, and the nature and end of society.
PHI	3160	History of Islamic Phil	3	Spring 2021	Islamic thought, concentrating particularly on Islamic medieval theology and philosophy.
PHI	3720	Marx & Marxism	3	Spring 2020	Marx on the theories of human nature, freedom and history; related developments in Marxist thought.
PHI	3990	Topics in Hist of Philosophy	3	Spring 2021	
PHI	3991	Philosophy for Theology I	1	Fall 2018	Historical and contemporary approaches to philosophical problems of theological relevance; philosophical methods for use in ministry; influence of Augustine on Western thought. Restricted to students in the Augustinian Novitiate Program.
PHI	3992	Philosophy for Theology II	2	Spring 2019	The relationships that exist between modern and contemporary philosophy and Christian theology; philosophical methods for use in ministry. Restricted to students in the Augustinian Novitiate Program.
PHI	4100	Plato & Aristotle	3		Selected texts and themes from Plato and Aristotle.
PHI	4120	Philosophy of Biology	3		Key assumptions of the contemporary sciences: the meaning of life, the relevance of science, the structure of the life sciences, the "doctrine" of DNA and molecular genetics, evolutionary theory, ecology and the "Gaia" hypotheses, and the ethical and soc
PHI	4125	Bioethics	3	Fall 2020	Advanced issues in clinical and research ethics: neuro-enhancement, radical life-extension, phase 1 trials on the non-consenting, ethics of life and death, and ethics of pandemics.
PHI	4140	Phil of Contemporary Music	3	Spring 2021	Critical listening to rock pop, jazz, rap, funk, punk, dance, and ambient music; relation of music to noise; theories of Hanslick, Nietzsche, Adorno, Barthes, Foucault, Deleuze, and Cage.
PHI	4150	Philosophy & Film	3	Fall 2020	Analysis of selected classics and current films from the perspective of basic philosophical concepts and questions.

PHI	4200	Philosophy of Language	3	Spring 2019	Major classical and contemporary philosophical theories concerning language, including the relationship of language to thought, experience and reality; theories of meaning, communication, linguistics, translation, poetic and religious language.
PHI	4210	Environmental Philosophy	3	Fall 2021	
PHI	4300	Death and Dignity	3	Spring 2021	An account of the most influential philosophical interpretations of death, and an exploration of the fact of dying as a political and social phenomenon grounded on historical examples.
PHI	4600	Psychoanalysis & Philosophy	3	Fall 2021	Philosophical implications of Freudian theory as it relates to the individual and culture; the role of the unconscious; interpretation, structure of the ego, human sexuality and the foundations of civilization.
PHI	4610	Philosophy of Mind	3	Spring 2021	The nature of mind, soul, consciousness; the mind-brain relationship; classical and contemporary philosophical approaches; the nature of person identity and moral responsibility.
PHI	4825	Existentialism	3	Spring 2021	The active, feeling and living human being as the starting point for thinking about existence as more than brute facts and rational truths. Alienation, absurdity, emptiness and dread but also the freedom, authenticity, commitment and creativity as human r
PHI	4900	Feminist Theories	3	Fall 2016	
PHI	4990	Independent Study & Research	3	Fall 2021	Topic chosen by the student and approved by the professor and the chair.
PHI	5000	Adv Sem for Phil Majors	3	Fall 2021	Special topic in philosophy or current interest to faculty and students. Course is open to Philosophy majors and minors and graduate students with the approval of the Director of Graduate Studies in Philosophy.
PHI	6000	Research Seminar	3	Fall 2021	Inquiry in depth into one major philosophical problem or into the thought of one major philosopher; practice in the use of research and bibliographical techniques. techniques.
PHY	1100	General Physics I	3	Fall 2021	Mechanics, heat and sound. Recommended for Biology majors.
PHY	1101	General Physics I Lab	1	Fall 2021	Selected experiments in mechanics, heat and sound. Recommended for Biology majors.
PHY	1102	General Physics II	3	Summer 2021	A continuation of PHY 1100; light, electricity and modern physics. Recommended for Biology majors.
PHY	1103	General Physics II Lab	1	Summer 2021	Selected experiments in light and electricity. Recommended for Biology majors.
PHY	1502	Gravity	3	Summer 2018	Gravitational force and the laws governing the motion of objects; Newton and Einstein's theories; role in the evolution of the universe; interaction with other forces of nature. Non-calculus based. For VSB and Arts majors (fulfills Arts core science req
PHY	2400	Physics I Mechanics	3	Spring 2021	Introduction to Mechanics. Designed for students in the College of Engineering.
PHY	2402	Physics II Elec & Magnet	3	Fall 2021	Electrostatics, DC Circuits, magnetism, and AC circuits. Designed for students in the College of Engineering.
PHY	2403	Phy Lab for Engineering	1	Fall 2021	Selected experiments illustrating the principles of Mechanics and Electricity and Magnetism. Designed for students in the College of Engineering.
PHY	2410	University Phy:Mechanics	3	Fall 2021	Vectors, kinematics, and dynamics of particles, rigid bodies, and fluids. Recommended for Science majors.
PHY	2411	Lab: Mechanics	1	Fall 2021	Selected experiments demonstrating the fundamental principles of Mechanics and Waves with emphasis on techniques of measurements and data analysis. Recommended for Science majors.
PHY	2412	Univ Physics:Elec & Mag	3	Spring 2021	Electrostatics, DC circuits, magnetism, and AC circuits. Recommended for Science majors.
PHY	2413	Lab:Elec & Magnetism	1	Spring 2021	Recommended for Science majors.
PHY	2414	Univ Physics: Thermo	3	Fall 2021	Heat, kinetic theory of gases, first and second laws of thermodynamics, wave motion acoustics, geometrical and physical optics. Recommended for Science majors.
PHY	2415	Lab: Thermodynamics	1	Fall 2021	Selected experiments in heat, waves and optics. Recommended for Science majors.
PHY	2416	Modern Physics	3	Spring 2021	Special theory of relativity, atomic theory, quantum physics, the Schrodinger equation, solid-state physics, nuclear physics, elementary particles and cosmology. Recommended for Science majors.
PHY	2417	Lab:Modern Physics	1	Fall 2021	Interference; Franck Hertz experiment; Photoelectric effect; Michelson interferometry; Millikan oil drop experiment; Electron Spin Resonance (ESR); Ferroelectricity; Superconductivity; Low Temperature physics experiments. Recommended for Science majors.
PHY	2601	Computational Phy Lab I	1	Fall 2021	Computer applications, data analysis and presentation, algorithms and programming, numerical methods, and basic graphics for Physics and Astronomy majors. Prerequisite:Any Intro Physics course (may be taken con- currently).
PHY	2603	Computational Phy Lab II	1	Spring 2021	Continuation of Computational Physics I.
PHY	3310	Electronics	3	Fall 2021	DC and AC analysis including network theorems, power, resonance, filters, bridge circuits, amplifiers, integrated circuits, active devices, digital logic circuits and applications.
PHY	3311	Electronics Lab	1	Fall 2021	Laboratory experiments are chosen to supplement the Physics 3310 lectures and to give experience with sophisticated electronic equipment.
PHY	4000	Elec & Magnetism I	3	Fall 2021	Electrostatics, Coulomb's and Gauss' Laws, Maxwell's first two equations, Laplace's equation and boundary value problems, dielectrics, currents in conductors.
PHY	4001	Elec & Magnetism I Lab	1	Spring 2021	Selected experiments in the field.
PHY	4002	Elec & Magnetism II	3	Spring 2021	Magnetism, Biot-Savart's law, Faraday's law, Maxwell's third and fourth equations, electromagnetic wave equation, radiation.

PHY	4003	Elec & Magnetism II Lab	1	Fall 2021	Selected experiments in the field.
PHY	4100	Mechanics I	3	Fall 2021	Newtonian Mechanics, oscillations (simple, non-linear and driven), Lagrangian and Hamiltonian dynamics, central force motion and scattering, special theory of relativity.
PHY	4102	Mechanics II	3	Spring 2021	Dynamics of rigid bodies, coupled oscillations, wave phenomena, fluid mechanics (steady and turbulent flow, the equations of Euler and Navier-Stokes).
PHY	4200	Mathematical Physics I	3	Spring 2021	Vector and tensor analysis, matrices and determinants, infinite series, functions of a complex variable.
PHY	4202	Mathematical Physics II	3	Fall 2021	A continuation of PHY 4200; second order differential equations, orthogonal functions, integral transforms, integral equations.
PHY	4301	Experimental Methods I	2	Fall 2021	Introduction to experimental methods in Physics. Applications of spectroscopic techniques in nuclear, solid-state, and materials Physic. Detection of particle and electromagnetic radiation, signal processing, spectral analysis and interpretation.
PHY	4303	Experimental Methods II	2	Spring 2021	Introduction to experimental methods in Physics continued: X-Ray and Mossbauer Spectroscopy; interaction of electromagnetic radiation with matter; resonant versus non-resonant scattering cross-sections; hyperfine interactions in solids, crystal field spl
PHY	5100	Quantum Mechanics	3	Fall 2021	Operators, Schrodinger Equation, one dimensional problems, harmonic oscillator, angular momentum, hydrogen atom, scattering theory.
PHY	5200	Thermo/Statistical Mech	3	Spring 2021	Statistical methods, statistical thermodynamics, Ensembles, Partition functions. Quantum statistics. Kinetic theory of transport processes.
PHY	5300	Subatomic Physics	3	Spring 2021	Structure of subatomic particles and nuclei, symmetries and conservation laws, interactions and nuclear models, radioactivity and passage of radiation through matter. A writing intensive course.
PHY	5500	Solid State Physics I	3	Fall 2020	Description of crystal structure, diffraction of X-rays, classification of solids, thermal properties of solids, dielectric properties, diamagnetism and paramagnetism, free electron theory of metals, band theory of solids.
PHY	6000	Advanced Optics	3	Fall 2019	Topics in geometrical and physical optics.
PHY	6400	General Relativity	3	Spring 2020	Introduction to Einstein's Theory of General Relativity. Differential geometry, equivalence principle, geodesics, and the Einstein equations. Applications to black holes, gravitational waves, and cosmology.
PHY	6450	Supervised Study in Physics	1	Fall 2021	Reading and/or laboratory work in a selected branch of physics under the direction of a member of the staff. Restricted to the Permission of the Instructor.
PHY	6500	Supervised Study in Physics	2	Fall 2021	Reading and/or laboratory work in a selected branch of physics under the direction of a member of the staff.
PHY	6600	Supervised Study in Physics	3	Fall 2021	Same as PHY 6500 with increased number of hours.
PHY	6900	Topics in Physics	3	Fall 2021	Lecture course in an area of Physics. May be repeated for credit if topics are different.
PJ	2250	Violence & Justice in the Wrld	3	Fall 2019	Examines root causes of violence, pathways to building a more peaceful and just world. Basic issues include, peace, justice, power dynamics, violence, nonviolence, restorative justice peacemaking, peacekeeping, and peace building.
PJ	2500	Education & Social Justice	3	Fall 2021	American education's contribution to class, gender, and "race" inequality; political bias in school curricula: unequal treatment of students by teachers and administrators based on "race", ethnicity, class, and gender; unequal allocation of resources amon
PJ	2700	Peacemakers & Peacemaking	3	Fall 2019	Classical and contemporary examples and approaches to peacemaking in response to injustice and social conflict. Issues to be considered include the nature and significance of nonviolent struggle, political reconciliation, and the role of religion in shapi
PJ	2800	Race, Class, & Gender	3	Fall 2021	A critical examination of the social constructions of race, class, gender, and sexuality in U.S. culture and the injustices and inequalities that arise from them. Strategies, policies, and procedures for change are also examined.
PJ	2900	Ethical Issues in P & J	3	Spring 2020	Introduction to contemporary complex moral issues. Examines economic, political, and social roots. Brings the Catholic Christian ethical tradition to bear to understanding their moral significance and responsibility to address them. Issues include: povert
PJ	2993	Internship	3	Fall 2021	Internship
PJ	2996	Internship	6	Fall 2021	Internship.
PJ	3000	Selected Topics	1	Fall 2021	Violence in families and society, the traditions of Just War theory, and the critiques of war from the perspective of pacifism and non-violence. The importance and role of the peacemakers of the world, the values of conflict resolution, and strategies th
PJ	4000	Selected Topics	3	Fall 2021	The history of the struggle for justice and human rights in geographical locations, such as the Middle East, Ireland, Africa, and Central America, focusing on such issues as world hunger and apartheid, and culminating in an attempt to articulate systemic
PJ	5000	Selected Topics	3	Fall 2021	Justice & discrimination in U.S. society from social, economic, political & ethical perspectives. Strategies for the just elimination of discrimination. Topics include civil rights, gender issues of justice, etc.
PJ	5100	Discrimination, Justice & Law	3	Spring 2021	Development of discrimination and civil rights law in the United States through case materials in areas of racial discrimination, gender-based discrimination, reverse discrimination, sexual preference-based discrimination, and age discrimination, if time
PJ	5400	Ethics, Justice and the Family	3	Fall 2018	The moral meaning of marriage; justice, gender, and the domestic division of labor; the legal protection of marriage and the parties to it; marriage, reproductive technology, and the commodification of children; the moral meaning of "having children"; the

PJ	5500	Politics of Whiteness	3	Spring 2021	Examination of scholarship addressing the structure, function, & manifestations of "whiteness," primarily in U.S. culture, & its relationship to issues of diversity. Topics also include white supremacy, white identity, & the future of critical white studi
PJ	5600	Independent Study	3	Fall 2021	Independent Study
PSC	1100	American Government	3	Fall 2021	Constitutional development; national institutions, federalism, civil rights and liberties; instruments of popular control. Pre-requisite for 2100 and 5100-level courses and PSC 6900.
PSC	1200	International Relations	3	Fall 2021	Theories and concepts in the study of international relations; important and enduring questions in world affairs; trends and changes in the post-Cold War and and post-9/11 world. Prerequisite for 2200 and 5200-level courses and PSC 6900.
PSC	1300	Comparative Politics	3	Fall 2021	Political dynamics of various countries and regions. Regime types and political institutions. Politics of inclusion and exclusion. Sources of political change and continuity. Pre-requisite for 2300 and 5300-level courses and PSC 6900.
PSC	1400	Political Theory	3	Fall 2021	A survey of early and modern political thought and its relevance to contemporary politics. Prerequisite for 2400 and 5400-level courses and PSC 6900.
PSC	1900	Research Seminar	3	Fall 2021	Covers elements required for writing research paper on a problem in political science, including using the library, evaluating and properly citing sources, understanding appropriate research methods, and writing and redrafting a research paper. Prerequisi
PSC	2110	U.S. State & Local Government	3	Fall 2020	Constitutions, institutions, instruments of popular control, and intergovernmental relations.
PSC	2120	U.S. Congress	3	Fall 2021	Congressional functions, structures, and procedures; distribution of power; elections, representation, parties, committees, and the legislative process. Relations with the President, executive bureaucracy, judiciary, and interest groups. Congress's role i
PSC	2125	U.S. Presidency	3	Fall 2020	The nature, functions, and development of the American presidency, including relations between the president and other Washington actors, the public and the press.
PSC	2130	U.S. Judiciary	3	Spring 2021	Historical overview of the Supreme Court; competing perspectives on judicial behavior; and patterns in the relationship between the Court and other branches of the federal government.
PSC	2140	US Con Law I: Powers&Struct	3	Fall 2021	Major Supreme Court cases concerning the powers of Congress and the president, federalism, commerce taxing, and voting.
PSC	2145	US Con Law II:Rights&Lib	3	Summer 2021	Major Supreme Court decisions, 1789 to the present, concerning provisions of the Bill of Rights and the Fourteenth Amendment; emphasis on constitutional "literacy," or the ability to read Court decisions and write about them.
PSC	2150	U.S. Pol. Parties & Elections	3	Fall 2020	The place of parties in national politics; the nature, organization, and functions of political parties; suffrage requirements and election methods; the activities of organized interests.
PSC	2190	U.S. Pub Opinion & Polit Behav	3	Fall 2021	The normative and empirical roles of public opinion and civic involvement in American democracy; conceptual and measurement issues, individual-level and societal factors influencing public opinion and political behavior.
PSC	2210	Globalization	3	Fall 2020	Transformation of international politics through diffusion of ideas, technology, migration, capital and markets. Globalization, diffusion, and interactions of ideas, technology and capital. Effects on domestic and international politics, economics, societ
PSC	2220	International Law	3	Fall 2021	The rules and principles of international law based on a study of treaties, diplomatic practice, and cases dealt with by international and national courts.
PSC	2230	International Organization	3	Fall 2021	The development of international organization, the U.N., its principles, structure, and accomplishments; regional organizations; prospects for the future.
PSC	2240	Internat'l Political Economy	3	Fall 2021	Interactions between domestic, comparative and international politics and economics. Institutions, ideas and power dynamics in trade, finance, and development. The movement of labor, goods, services, and capital across national boundaries.
PSC	2260	War and Conflict	3	Spring 2019	Causes of interstate war, laws and norms of war, nuclear proliferation and deterrence, terrorism, civil war, territorial disputes, religion and conflict, and humanitarian and military intervention and peacekeeping.
PSC	2310	Nationalism	3		National identity and consciousness, origin and development of nations and states. Role and effects of nationalism in modern politics, culture, society, and economy.
PSC	2330	East Asian Politics	3	Spring 2020	Northeast Asian countries' political and economic development after World War II.
PSC	2340	Politics of the Arab World	3	Fall 2021	Political change in the principal Arab States with emphasis on the diverse forms of rule and political movements. The impact of colonial rule and socioeconomic changes on political life, leadership, social structure, political culture, and modernization.
PSC	2350	African Politics	3	Fall 2020	Politics and societies of contemporary Africa. Colonialism and its legacies. Postcolonial regimes; authoritarianism, neo-patrimonialism and "big man" rule; political reform and democratization. Theories of conflict and conflict resolution. Economic develo
PSC	2360	Latin American Politics	3	Fall 2021	Politics and societies of contemporary Latin America. Legacies of social revolution and authoritarian rule; democratic transition and consolidation; market reforms and their consequences. Democratic representation; the resurgence of the political left; id
PSC	2370	Third World Politics	3	Spring 2019	Political systems of the developing world, including ideologies, the role of the military, nation building, gender issues, religion, ethnic conflict and additional topics.

PSC	2380	European Politics	3	Fall 2021	European political institutions, changes in party systems, and impact of European integration/globalization on domestic economies.
PSC	2390	Indian & South Asian Politics	3	Fall 2017	The historical development of India and Pakistan; their contemporary problems and conduct of foreign relations with the great powers.
PSC	2410	Early Political Theories	3	Spring 2019	The relevance of the classics of political thought for understanding modern politics from the Greeks to the modern era.
PSC	2420	Modern Political Theories	3	Spring 2021	The structure of modern political thought and developments of twentieth century political thought as an aid to understanding our age.
PSC	3110	Politics of Immigration (U.S.)	3		This course explores the varied perspectives of public, private, and nonprofit leaders on the nature of American citizenship from the founding era to the 21st century. It examines how the meaning of American citizenship continues to shape political life i
PSC	3120	Political Communication (U.S.)	3		The role, behavior and influence of communications in American politics.
PSC	3140	Race, Ethnicity & Pol. in U.S.	3	Spring 2021	The importance of race and ethnicity in American politics, and the politics (historical, legal, attitudinal, and behavioral) of four of the United States' principal racial and ethnic minority groups-blacks (African-Americans), Latinos, Asians, and Native
PSC	3150	Political Psychology	3	Spring 2020	The interplay between politics and psychology; principles, terminology, and methods of psychological theories to understand how people think and feel about politics and how politics affects their thinking.
PSC	3160	Black Politics	3		This course is designed to provide students with an overview of Black Politics and introduce several theories, approaches, and analyses of the African American predicament. The course also examines the dynamics of two of the most salient forms of Black Po
PSC	3165	Black Political Economy	3	Fall 2021	Black Political Economy examines the complex interplay between race and economics. The course covers the principles, terminology, and methods of standard economics and Black political economy. There is an examination of the complicated journey of Black wo
PSC	3210	American Foreign Policy	3	Fall 2021	The institutions, processes, and ideas which shape contemporary American foreign policy; the major problem areas.
PSC	3220	Middle East International Rels	3		Intra-regional and international problems facing the Middle East: the struggle for independence; the impact of the Cold War; the protracted conflict between Israelis and Arabs; and the tensions in the oil-rich Persian Gulf.
PSC	3230	Development and Aid	3	Spring 2021	Development and the role of official development assistance. Includes aid effectiveness, modalities, impact of globalization, conflation of aid with strategic purpose, and rising influence of non-traditional donors, such as China and oil-exporting countri
PSC	3240	East Asia Political Economy	3		Interactions between domestic and international actors in Asia; role of political regimes, institutions and firms; dynamic processes of trade and financial sector liberalization and economic crisis. Pre-requisite: PSC 1200 or junior standing.
PSC	3250	Genocide and Mass Killing	3	Spring 2021	Definitions of genocide and mass killing, causes of genocide and mass killing, contexts in which violence occurs, dynamics of violence, variations in violence, individual motivations of perpetrators, rescue and resistance, obstacles and opportunities for
PSC	3320	Russian Politics	3	Spring 2021	The contemporary Russian political system; political transformation from the Communist system which preceded it.
PSC	3330	British Politics	3	Spring 2020	Development of the British state; the powers of Parliament and other institutions; the British welfare state, public opinion, and policing; questions of union and devolution; major current topics in British politics.
PSC	3340	Irish Conflict and Peace	3	Spring 2020	Foundations of the Irish state; political system and party system development; conflict in Northern Ireland; relations within the divided island and between the Irish Republic and Britain; Irish social, political cultural and economic development; gender
PSC	3410	Theories of War and Peace	3	Summer 2021	The relevance of the classics of political thought for understanding modern politics from the Greeks to the modern era.
PSC	3420	American Political Thought	3	Fall 2018	The founding of the American Republic; nature of the federal union, factions, popular sovereignty, the extended republic, representation, separation of powers, and checks and balances. Subsequent issues and controversies about these and related matters.
PSC	3440	Politics and Religion	3	Fall 2020	The nature of religious and political identity; the possibility and desirability of keeping them apart; the relationship between religion and politics in a free society; religious pluralism, its requirements and consequences; the prospects for "civil reli
PSC	4175	Topics in Am Gov & Politics	3	Fall 2021	Topical courses in American Government and Politics offered on occasional basis.
PSC	4275	Topics in Internat'l Relations	3	Spring 2021	Topical courses in International Relations offered on occasional basis.
PSC	4375	Topics in Comparative Politics	3	Fall 2021	Topical courses in comparative politics offered on occasional basis.
PSC	4475	Topics in Political Theory	3	Spring 2021	Topical courses in political theory offered on an occasional basis.
PSC	5110	Ind Study in Am Gov & Politics	3	Summer 2021	Readings, research, and writing on topics in American government and politics under faculty supervision. Pre-requisite: permission of instructor and department chair.
PSC	5210	Ind Study in Intern'l Rel	3	Summer 2021	Readings, research, and writing on topics in international relations under faculty supervision. Pre-requisite: permission of instructor and department chair.
PSC	5310	Ind Study in Comparative Pol	3	Summer 2021	Readings, research, and writing on topics in comparative politics under faculty supervision. Pre-requisite: permission of instructor and department chair.

PSC	5410	Ind Study in Political Theory	3	Summer 2021	Readings, research, and writing on topics in political theory under faculty supervision. Prerequisite; permission of instructor and department chair.
PSC	6160	Washington Minimester	3	Summer 2021	A three-week program of seminars in Washington, D.C. with public officials, staff members, party leaders, and interest group representatives. Held annually in mid-May. Enrolls the previous fall. Limit: 15 students. Permission of instructor required.
PSC	6503	Internship Elective	3	Fall 2021	Internship.
PSC	6900	Political Sci Seminar	3	Fall 2021	Capstone seminar on specialized topics in political science.
PSY	1000	General Psychology	3	Fall 2021	Introductory examination of the fundamental concepts of psychology, with particular emphasis on the description of normal human behavior and those factors that underlie it. Prerequisite to all other courses in psychology.
PSY	1001	Intro to Brain and Behavior	3	Fall 2021	Examination of fundamental concepts in psychology with special emphasis on underlying neural mechanisms. Satisfies same pre-requisite requirements as PSY 1000 and is the preferred introductory psychology course for CBN majors. Cannot receive credit for bo
PSY	2000	Intro Statistics	3	Fall 2021	Basic concepts, assumptions, and applications of descriptive statistics and inferential statistics.
PSY	2050	Research Methods in Psy.	3	Fall 2021	Introduction to the reading, design, and reporting of psychological research. Writing intensive.
PSY	2100	Sem Professional Development	1	Fall 2021	Overview of ethical and professional issues in psychology.
PSY	2150	Undergrad Research Experience	1	Fall 2021	Supervised research experience. Students may register for PSY 2150 more than once.
PSY	2400	Cross-Cultural Psychology	3	Fall 2021	Theory and research on cultural influences on human diversity in behavior and psychological processes.
PSY	2450	Psychology of Gender	3	Fall 2017	Sexism in psychological research & theory; gender stereotyping & discrimination; psychological theories of gender; women's physical & mental health, female sexuality & lifespan development; sexual orientation; victimization of women; biological influences
PSY	2700	Industrial/Organizational Psy	3	Fall 2020	Applications of psychological data, theories, research methods, and testing procedures to individuals in organizational settings.
PSY	2800	Human Factors	3	Fall 2020	Application of theories of human performance (perception, cognition, and motor control) to the design of products and systems.
PSY	2900	Special Topics	3	Fall 2021	An intensive examination of selected topical areas within psychology.
PSY	2901	Special Topics Laboratory	1		Laboratory course corresponding to a special topics course. May be required for a particular topics course.
PSY	2905	Special Topics Seminar	1	Fall 2021	Selected topics in memory improvement, time management, stress management, interpersonal communication, etc. Open to all Majors. Only three 1-credit seminars may be applied toward graduation. Cannot be used to fulfill Psychology electives.
PSY	2993	Psychology Internship	3	Fall 2021	Supervised work experience in agency, hospital, school, or company. Minimum 3.0 G.P.A., Psychology major. Permission of instructor. Apply in Psychology Department office. Cannot be used to fulfill Psychology electives. Graded S/U.
PSY	3200	Human Development	3	Fall 2021	Theory and research on social/personality, physical, and cognitive/intellectual changes from infancy through old age.
PSY	3300	Perception	3	Summer 2021	Theory and application of sensory and perceptual processes such as distance perception, color vision, illusions and deafness.
PSY	3500	Psych of Personality	3	Fall 2021	Theories, dynamics, and structure of personality. Students cannot receive credit for this course and PSY 4700.
PSY	3600	Social Psychology	3	Fall 2021	Survey of theory and research on altruism, attraction, social cognition, the self, attitudes and attitude change, social influence, affiliation, personal control, and aggression.
PSY	3700	Abnormal Psychology	3	Fall 2021	Classification, etiology, and treatment of mental and behavioral disorders with emphasis on contemporary theory and research.
PSY	3800	Clinical Psychology	3	Fall 2021	Fundamental concepts, basic areas of professional functioning, and contemporary issues in the mental health field.
PSY	4200	Biopsychology	3	Fall 2021	Theoretical and laboratory examination of basic neural and hormonal processes underlying behavior.
PSY	4500	Cognitive Psychology	3	Fall 2021	Theory and research on human learning, memory, and cognitive processes. Writing intensive.
PSY	4600	Animal Learning & Cognition	3	Spring 2021	Cognitive mechanisms responsible for simple behavior and behavioral change as they have been studied using animal subjects.
PSY	5150	Foundations of Modern Psych	3	Fall 2021	Overview of the major concepts and theories of psychology presented in a historical context.
PSY	5250	Contemp Research Issues in Psy	3	Fall 2021	Recent and emerging topics, issues, and methods in psychological science.
PSY	5900	Independent Research Project	3	Fall 2021	Supervised research project and report. Student may register for PSY 5900 more than once; however, only 3 hours of research can be applied toward the degree requirements in psychology.
RES	2150	Real Estate Fundamentals	3	Fall 2021	An introduction to the field of real estate, includes the following broad topical areas: the legal nature of real estate, valuation and appraisal, real estate finance, and the secondary mortgage market.
RES	2250	Real Estate Law	3	Fall 2021	Topics in real estate law: ownership, possession and management of land and buildings, landlord and tenant, nonpossessory rights, contractual documents and agreements, transfer of rights; title insurance, moral and ethical dimensions, financing the transa

RES	2340	Contemp Topics in Real Estate	3	Fall 2020	Contemporary topics in Real Estate: Contemporary issues and topics in Commercial real estate including valuation, sustainability and topics of interest in the current environment. Must be enrolled in one of the following Fields of Study (Major, Minor, or
RES	3001	Real Estate Internship	3	Fall 2021	Employment with an approved firm in the area of Commercial Real Estate where experience is gained with appropriate training, instruction, and supervision. Course does not fulfill the requirements for major. A minimum GPA of 2.5, approval of the office of
RES	3150	Real Estate Investments	3	Fall 2021	Valuation of commercial real estate properties including discounted cash flow approach. Pro forma accounting statement modeling, cash flow forecasting, lease price determinants, initial and exit cap rate determination and ultimately valuing actual real es
RES	3250	Advanced Real Estate Modeling	3	Spring 2021	Apply advanced modeling techniques to underwrite and value commercial real estate assets, Argus certification, excel based modeling. Monte Carlo simulation, Google sketch-up, partnership waterfall modeling.
RES	4150	Real Estate Development	3	Fall 2021	Senior capstone class that focuses on the development process from land acquisition to final product incorporating real time real estate development projects. Specific topics include land acquisition, tax issues, optimal land use decisions, architectural
RLL	1000	Special Studies	3		Studies in one of the areas not included in the languages, literatures and civilizations usually offered, e.g., Polish, Romanian and Ukrainian; readings and discussions.
RLL	2221	Latinx Cultural Studies	3		The purpose of this course is to examine the experiences of different Latino communities living in the United States (Puerto Rican, Cuban, Dominican and Mexican) through literature, film, music, art and popular culture. Topics to be discussed include experi
RLL	3046	Readings in FRE & Francoph Lit	3		Analysis of specific trends in French and Francophone literatures. Topics may include Surrealism, the New Novel, Existentialism, Negritude, Creolite, etc. Taught in English.
RLL	3075	Theme in FRE & Francoph Cinema	3	Spring 2020	Analysis of major works dealing with a chosen topic. The course may explore a specific movement (the New Wave, etc.) Taught in English.
RLL	3100	Themes in Romance Studies	3		Advanced study of topics in more than one Romance studies area. (FFS, ITA, or SPA) Taught in English.
RLL	3287	Cult Stud: FRA & Francoph Worl	3		Exploration of the political, economic and sociocultural connections between France and its former colonies. Potential topics include France and the Maghreb, the African diaspora in France, etc. Taught in English.
RLL	3412	Topics	3	Fall 2021	Advanced study of topics of special interest in Italian, French or Spanish literary and/or cultural studies. May be repeated for credit if topic changes. Taught in English.
RLL	3413	Topics on Italy and Beauty	3	Spring 2021	Advanced study of expressions of beauty as manifested in Italian Culture Literature, Art, Philosophy, Design, and Commerce. May be repeated for credit if topic changes. Taught in English
RLL	3420	The Renaissance	3		Advanced studies in the culture and art of the Renaissance, explored either by way of an overall European perspective, or with a specific focus on Italy, France, and Spain. Taught in English.
RLL	3430	European Intellectual Thought	3		Overarching topics and common themes in the European Intellectual thought, as outlined in literature, philosophy, and art from the middle ages to the present. Readings in English translation will touch upon the Spanish, French, Italian, British, and Germ
RLL	3440	The Postcolonial Perspective	3	Fall 2017	Theories related to colonization and postcolonial representation are examined either in several geographical areas simultaneously, or are applied to a specific literary/cultural tradition.
RLL	3450	Themes in Cultural Studies	3	Spring 2018	Cultural meaning-making process manifest in cultural products, traditions and representations. Taught in English.
RLL	3744	Cervantes	3		Readings in English of Cervantes' work. Taught in English.
RUS	1111	Introductory Russian I	6	Fall 2021	Functional use of Russian for students with no prior knowledge of Russian. Recitations, readings and oral drills. Supplementary language laboratory work.
RUS	1112	Introductory Russian II	6	Summer 2021	Functional use of Russian for students with no prior knowledge of Russian. Recitations, readings and oral drills. Supplementary language laboratory work. RUS 1111 or equivalent or permission of instructor.
RUS	1123	Intermediate Russian I	3	Fall 2021	Review of Introductory Russian, followed by further development of reading, speaking, writing, and translation skills.
RUS	1124	Intermediate Russian II	3	Spring 2021	Continued development of skills employed in Intermediate Russian I.
RUS	1125	Intermediate Russian III	3		Continued development of skills employed in Intermediate Russian II.
RUS	1131	Conversation Composition	3	Fall 2021	Advanced communication skills including reading and discussing topics on current events.
RUS	1132	Advanced Convers & Comp	3	Spring 2021	A continuation of RUS 1131.
RUS	3412	Russian Culture in Context	3	Fall 2016	Advanced study of topics of special interest in Russian language, literary and/or cultural studies. May be repeated for credit if topic changes.
RUS	4110	Russian Film	3	Fall 2021	Understanding of Russian life and culture today by focusing on basic historical, ideological, economic, religious and cultural developments. Each student chooses one aspect of social development for further research. Conducted in English.
RUS	4120	The Russian Short Story	3	Spring 2021	Representative Russian short stories from Pushkin to Pasternak. Conducted in English.
RUS	5900	Russian:Independent Study	3	Fall 2021	Supervised study, activity or research. May be taken more than once. Prior approval of chair and instructor.

SAR	2009	Sounds of Slavic Spirit	3		The cultural heritage of the Russian people from the chants of Muscovy to the present: Byzantine rite, varied folklore, the great romantic composers, ballet, opera, movies, the soviet experience, right down to jazz and the westernizing to the present. N
SAR	2010	Intro to Calligraphy	3	Fall 2021	A practical and historical approach to the study of writing. The development of the written letter and the ability to use the newly acquired hand, with the proper materials and techniques.
SAR	2020	Basic Watercolor Techniques	3	Fall 2021	Techniques of transparent watercolor painting with concentration on still life.
SAR	2021	Basic Drawing Techniques	3	Fall 2021	A foundation course in drawing, emphasizing visual concepts through work in a variety of media including charcoal, pencil and ink. Direct observation of the model, composition, perspective, and theory.
SAR	2022	Basic Oil Painting	3	Fall 2021	Basic techniques in the oil medium, with emphasis on understanding the nature of canvas as a vehicle, and color theory.
SAR	2100	Music Theory I	4	Fall 2020	Basic materials and structures of music (pitch and rhythmic notation, scales and keys, the basics of rhythm, etc.), as well as composition, aural, and sight-reading skills.
SAR	2110	Western Music to 1750	3	Fall 2021	Development of Western European music from its earliest traceable roots through the Renaissance, and Baroque periods through the musical characteristics, instruments, and theory of each period, as well as the cultural and historical context.
SAR	2111	Western Music:1750-Present	3	Spring 2020	Development of Western European music from the close of the Baroque era (ca. 1750) through the Classical, Romantic, and Modernist eras to the present through the musical characteristics, instruments, and theory of each period, as well as the cultural and
SAR	2113	The Charm of Music	3	Fall 2021	A listening study approach to the many-faceted world of music from the great classics and their masters to the cultural explosion of the twentieth century.
SAR	2114	Words & Music: The Art of Song	3	Fall 2021	An introduction to the art of songwriting through the study of existing songs and their components (imagery, meter, rhyme, structure, melody, harmony, rhythm, etc.), as well as the development of students' own songs through specific assignments and exerci
SAR	2118	The Broadway Musical	3		The art form of American musical theatre, beginning with roots in late 19th century operetta, the emergence of jazz, folklore, big band era, up to the present.
SAR	2119	Jazz:America's Music	3	Fall 2021	A listening study of the greats of American Jazz, beginning with Ragtime, New Orleans, Big Band, Swing, Fusion and current trends.
SAR	3030	Special Topics in Music	3	Spring 2021	A specialized area of music studies combining elements of music history, theory, and composition, as well as performance.
SAR	3031	Special Topics in Studio Art	3	Fall 2021	A fine arts course that introduces the student to the history, theory and technique of art resulting in the creation of an original piece of art.
SAR	4007	Painting of Icons	3	Spring 2021	Painting icons in the classical, Byzantine Russian tradition including the study of the historical and physical inquiry into the iconic imagery of the twentieth century visual culture. No artistic talent necessary.
SAR	5000	Independent Study	3	Fall 2016	
SAR	5004	Basic Printmaking	3	Fall 2021	Basic introduction, to the traditional methods of the fine art of making prints including Monoprint, Stencil (e.g. Screen Printing, Relief (e.g., Woodcut, Linoleum), Intaglio (e.g., Experimental techniques of color printing, foam printing). The artistic d
SBI	0099	Excel		Summer 2021	Provides a basic understanding of Excel functions along with financial and valuation models. Course is open to currently enrolled SBI students.
SBI	1000	Professional Success	1	Summer 2021	Skill building and strategizing for job/internship search; exposure to job/internship resources and practicing professionals. Course is open to students accepted to the SBI Program.
SBI	1001	Business Fundamentals	1	Summer 2021	Dynamic nature of business in a changing environment explored. Cross functional approach to understanding business operations. Emphasis on purpose of business; how business vision is actualized. Action learning, problem solving approach utilized.
SBI	1006	Business Law Basics	1	Summer 2021	Basic legal issues involved in the creation and operation of business organizations. RESTRICTED TO: SBI Students
SBI	2005	Applied Economics	3	Summer 2021	Decision making of households, firms and the government with respect to the allocation of scarce resources. Topics include supply and demand, nature and characteristics of the U.S. economy, market structures etc.
SBI	2006	Corporate Responsibility	3	Summer 2017	Core concepts of business law, ethical decision-making, corporate social responsibility & governance. Restricted to students accepted to the SBI Program.
SBI	2007	Analytics & Info Technologies	2	Summer 2021	Explore alignment of info technologies with business; focus on acquisition of business data using info systems; gain meaningful insight on data using analytical tools. RESTRICTED TO: SBI Students
SBI	3005	Financial Mgmt & Reporting	4	Summer 2019	Foundational principles of corporate finance & financial accounting; emphasis on solving business problems. Restricted to students accepted to the SBI Program.
SBI	3006	Competitive Effectiveness	4	Summer 2019	Integration of marketing & management concepts as an approach to creating value in business. Restricted to students accepted to the SBI Program.
SBI	3010	Financial Accounting	2	Summer 2021	Generally accepted accounting principles and both the creation and analysis of financial statements. Exposure to importance of accounting in making decisions including those related to business, investing, and financing.
SBI	3020	Principles of Finance	2	Summer 2021	Financial decision-making and firm value; topics include time value of money, bond valuation, measuring risk and return, stock valuation, the cost of capital, and capital budgeting.
SBI	3030	Management Essentials	2	Summer 2021	Introduction to organizational structures and functions; leading, planning, controlling, and problem solving through effective utilization of and respect for human capital.

SBI	3040	Principles of Marketing	2	Summer 2021	Strategic and applied introduction to how goods and services are developed, distributed, priced and communicated to meet consumer needs.
SBI	3145	Managerial Economics	3	Summer 2021	Use of economic concepts and tools to determine management strategies that efficiently allocate scarce resources within the firm to optimize the value of the firm.
SCI	1903	Internship Elective	3	Fall 2021	Permission of Program Director. Junior or senior Comprehensive Science students with a 3.0 QPA only.
SCI	1906	Internship Elective	6	Fall 2021	Permission of Program Director. Junior or senior Comprehensive Science students with a 3.0 QPA only.
SCI	2993	Internship Elective	3	Fall 2021	Permission of Program Director. Junior or senior Comprehensive science students with 3.0 QPA only.
SCI	2996	Internship Elective	6	Fall 2021	Permission of Program Director. Junior or senior Comprehensive Science students with a 3.0 QPA only.
SCI	5300	Capstone Seminar	3	Fall 2021	Selected topics with an interdisciplinary/multidisciplinary science viewpoint; reading of primary literature, secondary literature, and/or selected experiments; students oral and written presentations and discussions.
SCI	5900	Independent Research	3	Fall 2021	Supervised study, activity or research with interdisciplinary or multidisciplinary content. Prior approval of director and instructor.
SCSC	1975	Business in British Society	3	Spring 2020	Political, economic, social context of British business. Intercultural competence and contemporary affairs in Britain. Preparation for Global Citizens Program internship experience. Must be enrolled in Global Citizens Program.
SL	1000	Serv Learning 4th Hour Seminar	1	Fall 2021	Service-Learning Seminar is a requirement for students in the Sophomore Service-Learning Community. Through the integration of knowledge, and experience through weekly service, students dialogue to critically reflect on the systemic issues and cultural na
SL	3000	Service Learning Practicum	3		Community based service experience that connects current and prior coursework to real world applications. Written and communal reflection is directed toward understanding the implications for the organization, society, and self- a final paper/project inco
SOC	1000	Intro to Sociology	3	Fall 2021	Introduction to the analysis of social behavior, emphasis on socialization, collective and group behavior.
SOC	1500	Social Problems	3	Summer 2021	Significant problems of American society; the sociocultural basis of social problems, the conditions facilitating their incidence, and approaches to therapeutic intervention.
SOC	1903	Internship Elective	3	Spring 2017	
SOC	2200	Sociology of Deviance	3	Fall 2021	A sociological examination of rule-breaking behavior; causal theories of deviance; types of deviance and their distribution in contemporary society.
SOC	2300	Sociology of the Family	3	Fall 2021	Institutional organization of mate selection, courtship, and marriage relationships in American society; family relationships and functions; family disorganization and change.
SOC	2400	Sociology of Social Work	3	Fall 2021	History and development of social welfare; basic issues in social welfare planning and administration. The major methods of social work, practice; social casework, group work and community organization, in such areas as child welfare, family service and c
SOC	2600	Sociology of Religion	3	Fall 2019	The interaction between society and religion; religion and scientific claims; investigation of human nature as social and the concept of oneness in religion.
SOC	2900	Politics, Economy and Society	3	Fall 2017	Relationships between state and society from a comparative perspective. Focuses primarily on the United States, with frequent references to the experiences of other developed nations as well as those of third world countries.
SOC	2950	Perspectives on US Poverty	3	Spring 2018	Poverty in the United States, emphasizing the experience of the past thirty years (measurement, causes, and policies to combat poverty). Emphasis on the special problems of urban poverty and poverty among children.
SOC	2993	Internship	3	Fall 2021	Internship
SOC	3300	Sociology of Law	3	Spring 2021	The meaning, origin, and impact of law viewed from several sociological perspectives; the law in action and the social context of legal professions.
SOC	3400	Health, Medicine & Society	3	Fall 2021	This course explores the social dimensions of health, disease and illness, focusing especially on the social determinants of disease, the social experience of illness, and the role and meaning of medicine and public health in modern U.S. society. The clas
SOC	3500	Sociology of Gender	3	Fall 2021	Exploration of gender as a social construct shaped by social structures and cultural norms; focus on intersections of gender with other axes of inequality including race/ethnicity, social class, sexuality, and citizenship.
SOC	3600	Sociology of Race & Racism	3	Fall 2021	Development of race and ethnic relationships in America; the impact of power-conflict relations on race and ethnic patterns; particular attention given to development from early 1950's to present.
SOC	3700	Urban Sociology	3	Fall 2020	The nature of the city; history of urban settlement; urban form; institutions, organizational structures and processes; major problems of living in urban America.
SOC	3800	Social Movements	3	Fall 2021	The sociological study of social movements, including mobilization, participation, tactics, goals and ideology; the social contexts in which movements arise and develop; the nature and influence of historical and contemporary movements and activism.
SOC	4000	Special Topics	3	Fall 2021	Topics addressing special or emerging interests, chosen for their current importance and the specific expertise of an instructor.
SOC	4200	Sports and Society	3	Spring 2021	Sports as both a unifying and divisive social force. The corporatization and commodification of organized sports.
SOC	5050	Soc Theory & Public Policy	3	Fall 2021	Influence of sociological ideas on social policies. Students will be expected to design a theoretically driven empirical study which impacts on some public policy.

SOC	5100	Contemp Thry & Research	3	Spring 2017	Significant contemporary contributions to sociology theory and research.
SOC	5300	Data Analysis-Social Scientist	3	Fall 2021	
SOC	5400	Applied Research in Soc	3	Fall 2021	The development of real-world research skills through the application of sociological methods and statistics. Special emphasis is given to sampling, measurement, applied statistics, data management and evaluative research.
SOC	6000	Sociology Independent Study	3	Spring 2021	Supervised project or research culminating in research report or major paper.
SOC	6500	Seminar	3	Spring 2021	Advanced course for seniors focusing on particular substantive area; topics rotate.
SPA	1111	Introductory Spanish I	4	Fall 2021	Groundwork Spanish, including oral proficiency, aural comprehension, and reading; for students with no prior knowledge of Spanish. Supplementary language laboratory work and oral drills.
SPA	1112	Introductory Spanish II	4	Fall 2021	SPA 1112 is the continuation of Introductory Spanish and as such, students needs to know that some knowledge of Spanish is necessary in order to start at the SPA 1112 level. Groundwork Spanish, including oral proficiency, aural comprehension, and reading;
SPA	1121	Intermediate Spanish I	3	Fall 2021	Review of grammar, composition, reading and conversation. Students should have completed SPA 1111 and 1112 or the equivalent.
SPA	1122	Intermediate Spanish II	3	Fall 2021	Review of grammar, composition, reading and conversation. Students should have completed SPA 1121 or the equivalent.
SPA	1130	Span. for Heritage Speakers I	3	Fall 2021	Combination of reading and writing in addition to speaking. Work is individualized for needs of students. Objective is to prepare students for a more advanced course. Restricted to students with Hispanic background who have been exposed to Spanish at home
SPA	1131	Conversation & Composition I	3	Fall 2021	Regular practice in conversation and composition with review of grammar and continuing work on language skills in Spanish. Students should have completed SPA 1122 or the equivalent.
SPA	1132	Conversation & Composition II	3	Fall 2021	Spanish 1132 is a continuation of 1131 with more intensive practice in conversation and composition in Spanish, through literary and cultural analysis of texts, as well as a review of difficult grammatical points. As a result, students will develop their
SPA	1138	Advanced Grammar	3	Fall 2021	Intensive grammar review with special attention to literary style. Students should have completed 1132 or the equivalent.
SPA	1140	Writing & Stylistics in Span.	3	Fall 2021	Intensive practice in written expression and textual analysis for heritage and non-heritage speakers. Compositions are modeled on selected Spanish texts.
SPA	1142	Adv. Spanish for Health Prof.	3	Fall 2021	Beyond improving the linguistic competence of students, this course aims to expose the challenges of the medical profession within the United States and how it addresses problems of power, oppression, deprivation, marginalization, and/or social privilege.
SPA	2012	Special Topics Abroad	3	Summer 2019	The course will serve to transfer study abroad courses at the 2000 level whose description is relevant to the program but do not have an exact equivalent in our curriculum. Pre-requisite SPA 1132 or authorization from chairperson.
SPA	2124	Sounds of Spanish	3	Spring 2021	Overview of major features of Spanish phonetics and phonology with a secondary focus on regional and social variations found in the Spanish-speaking world. Applications to measurement and analysis of acoustic features of speech and improvement of Spanish
SPA	2220	Literature & Culture of Spain	3	Fall 2021	The foremost works of Spanish literature from the beginnings to present day. A required course for majors. Students should have completed 1132 or the equivalent. Pre-requisite SPA 1132 or authorization from chairperson.
SPA	2221	Lit. & Cult. of Latin America	3	Spring 2021	Spanish-American literature from colonial times to the present. A required course for majors. Students should have completed 1132 or the equivalent. Pre-requisite SPA 1132 or authorization from chairperson.
SPA	2993	Community Interpre. Internship	3	Fall 2021	A community-based experience helping lawyers translate & interpret for the Philadelphia Hispanic community. Students will be required to undergo an interview process with the instructor in order to ascertain whether they possess the necessary oral and wri
SPA	3025	Faces of Modernity	3	Fall 2021	Study of artistic trends in twentieth century Spain. Pre-requisite: SPA 1132 or authorization from the chairperson.
SPA	3044	Tales of an Unstable World	3	Spring 2020	Representative trends in 20th and 21st Centuries Spanish novels. Pre-requisite: SPA 1132 or authorization from chairperson
SPA	3045	Spanish Dystopian Fiction	3	Spring 2021	This popular course analyzes several kinds of Spanish dystopian fiction. The analysis of these texts will allow students to understand how renowned Spanish authors see the future of our planet and civilization. Pre-requisite: SPA 1132 or authorization fro
SPA	3046	Latin America Now	3		This course examines the most contemporary cultural movements happening in Latin America: environmentalism, feminism, indigenism, populism, etc. To do so we will analyze literary, journalistic, and sociological texts as well as visual sources. Prerequisite
SPA	3047	Entangled Hist in Col Latin Am	3		This course examines major themes in colonial literature through a corpus of novels, short stories, poems, images, and historical documents. Students will examine different materials related to the pre-Hispanic and early modern world and discuss how today
SPA	3054	Hispanic Poetry	3	Summer 2017	A study of Spanish and Spanish-American foremost male and female poets from Spain's vanguard movement to present day jointly from Latin America's colonial times to present day against Europe's socio-political and aesthetic backdrop. Pre-requisite: SPA 113

SPA	3064	Spanish Theatre of 20 & 21 c.	3	Spring 2020	A critical analysis of representative dramatic works of Spain from Jacinto Benavente to present day, with special emphasis on women dramatists and gender issues of the twentieth and twenty-first centuries within the historical and socio-cultural evolution
SPA	3074	Hispanic Cinema	3	Fall 2021	Spanish films based on literary works as a medium will be used to better understand contemporary Spanish culture and civilization. Pre-requisite: SPA 1132 or authorization from chairperson.
SPA	3214	Intro to Spanish Linguistics	3	Fall 2021	The structure of Spanish. Methods, findings, and theory of linguistic research on the sound system and the structures of present-day Spanish. The basics of abstract linguistic analysis. Hands-on introduction to the major subdisciplines of linguistics: mor
SPA	3254	Spanish Lyric Tradition	3	Spring 2021	Examines the major themes and evolution of Spanish lyrical verse through the political and socio-cultural experiences of Spain's most representative male and female poets from its beginnings to present day. Pre-requisite: SPA 1132 or authorization from c
SPA	3412	Special Topics	3	Fall 2021	Advanced study of topics of special interest in Spanish literary and/or cultural studies. May be repeated for credit if topic changes. Pre-requisite: SPA 1132 or authorization from chairperson.
SPA	3485	Nature in the Middle Ages	3	Fall 2021	Nature in Medieval Culture explores issues of sustainability, race gender and intersectionality in Medieval literature. Pre-requisite: SPA 1132 or authorization from the chairperson.
SPA	3654	Early Modern Poetry	3	Spring 2017	Traces the political and socio-cultural milieu of Spain's Early Modern era as reflected in the works of representative poets of Spain's renaissance period at the beginning of Europe's 16th century through Spain's baroque ending with the close of the 17th
SPA	3744	Cervantes	3	Fall 2016	An interdisciplinary approach to Cervantes's work. Pre-requisite: SPA 1132 or authorization from chairperson.
SPA	3764	Monster & Ghosts in Span Roman	3		This class studies the canonical texts of Spanish Romanticism within the European context. The different literary genres are studied in dialogue with other arts and with the Spanish society of that period. The goal is to understand the thinking and feelin
SPA	3944	Latinx Lit and Performance Art	3		This course will expose students to performance studies and literary criticism. Overall, the seminar offers a historical and critical grounding for Chicano/Latino writing in the US by surveying Latinx literature and performance from the nineteenth century
SPA	3970	Research Seminar	3	Fall 2021	Principles and techniques of literary research. Overview of major Spanish and Spanish-American authors and representative works. Pre-requisite: SPA 1132 or authorization from the chairperson. Required to obtain a major in Spanish.
SPA	5900	Independent Study in Spanish	3	Fall 2017	Supervised study, activity or research. May be taken more than once. Pre-requisite: Intermediate Spanish or above. Prior approval of chair and instructor. Permission given only in very special situations.
STAT	1230	Intro Statistics I	3	Fall 2021	Displaying and summarizing data, basic probability concepts, normal distributions, sampling distributions, estimation for a single population parameter, regression and correlation. Not open to students who have completed MAT 1505.
STAT	1235	Intro Statistics II	3	Spring 2021	Probability concepts, hypothesis testing, inferences about means, variances and proportions, contingency tables, analysis of variance. Not open to students who have completed MAT 1505.
STAT	1250	Stats in Health Care Research	3	Fall 2021	Descriptive and inferential statistics: graphical displays, estimation, & hypothesis testing. Restricted to nursing students; others by special permission only.
STAT	1260	Elementary Statistics	3		Introduction to statistics including topics such as study design, graphical and numerical descriptive statistics, bivariate data analysis, probability, sampling distributions, confidence intervals, hypothesis testing, goodness of fit tests, analysis of va
STAT	1313	Statistics for Life Sciences	3	Fall 2021	Statistical concepts and methods with applications in biological and life sciences; data visualization, descriptive statistics, probability distributions, interval estimation and hypothesis testing for one and two variables, statistical software.
STAT	1430	Business Statistics	4	Fall 2021	Statistical concepts and methods useful in analyzing problems in all areas of business. Descriptive statistics, probability, sampling distributions, confidence intervals, hypothesis testing, regression analysis, and time series. Applications in various ar
STAT	4210	Bayesian Statistical Analysis	3	Fall 2021	Application of Bayesian statistical procedures. Implementation using the programming language R. Bayes's Theorem. Bayesian statistical inference. Various types of prior distributions. Computer-intensive methods. Assessing the prior. Robustness analysis. W
STAT	4310	Stat Methods	3	Fall 2021	Data displays and summarization, probability distributions, point and interval estimation, hypothesis testing, categorical data analysis, regression and correlation.
STAT	4315	Applied Statistical Models	3	Fall 2021	Simple and multiple linear regression, including prediction, correlation, model building, multicollinearity, influential observations, and model fit; ANOVA for designed experiments, including completely randomized, randomized block and factorial designs;
STAT	4380	Data Science	3	Fall 2021	Combining and summarizing real-world data to inform decision-making and predictions; data wrangling, visualization, text mining, ethics; uses R programming language. Some programming experience recommended.
STAT	4416	Design of Experiments	3		Completely randomized, randomized block, and Latin square designs; full and fractional factorial designs; nested and split plot designs; response surface methodology.

STAT	4450	Regression for Biostatistics	3	Fall 2021	Regression methods for analyzing medical and biological data, including multiple regression, logistic regression, survival modeling, and longitudinal mixed modeling.
STAT	4452	Nonparametric Statistics	3		One-sample, two-sample, and multi-sample rank tests; nonparametric confidence intervals; permutation tests; nonparametric regression and correlation; the bootstrap.
STAT	4480	Data Mining	3	Spring 2021	Supervised and unsupervised data mining techniques, including clustering, classification, and association rule learning.
STAT	5700	Math Statistics I	3	Fall 2021	Probability, random variables, joint distributions, expected values, limit theorems, distributions derived from the normal distribution.
STAT	5705	Math Statistics II	3	Spring 2021	Survey sampling, parameter estimation, hypothesis testing, two sample tests, analysis of variance, analysis of categorical data, linear least squares.
STAT	5900	Seminar in Statistics	3		Supervised study of selected topics or problems in statistics, student presentations. May be repeated for credit if content is different.
STAT	5905	Seminar in Statistics	3	Fall 2021	Supervised study of selected topics or problems in statistics, with student presentations and papers. May be repeated for credit if content is different.
STAT	5910	Topics in Statistics	3	Fall 2020	Lecture course in an area of statistics. May be repeated for credit if topics are different. Prerequisites: Dependent on Topic.
SWA	1111	Intro Swahili Language I	4	Fall 2021	Groundwork in Swahili, including oral proficiency, aural comprehension, and reading knowledge; for students with no prior knowledge of Swahili. Supplementary language laboratory work and oral drills.
TEST	1000	Test 1		Fall 2019	This is a test course, created for testing purposes; testing , testing, testing we go.
TEST	1001	test 2		Spring 2020	
THE	2019	The Theatrical Expernce	3	Fall 2021	The variety of arts and crafts that combine to create theatre. Through hands-on experience, discussion, and performance, the interrelations among dramatic idea, stage direction, acting, design and technical elements that harmonize in a theatrical producti
THE	2025	Improvistional Theatre	3	Fall 2021	Improvisation to explore non-verbal communication strategies and the study of theatre as a communication medium. Readings in non-verbal communication and modern theatre theory.
THE	2029	Fund Princ of Acting	3	Fall 2021	Traditional acting theories and basic techniques: games, improvisation, sensory awareness exercises and beginning work on scenes.
THE	2030	Advan Princ of Acting	3	Spring 2020	Creation of an original piece of theater. Self-selected scenes used to deepen individual growth.
THE	2032	Elements of Dance	3	Fall 2021	The broad range of dance styles, dance theory, vocabulary, and body placement.
THE	2033	Advanced Elements of Dance	3	Spring 2021	Expanded study of dance styles, dance theory, vocabulary, and body placement.
THE	2034	Musical Theatre	3	Spring 2021	Explores the conventions of musical theatre. Practical work in the application of musical performance theory to specific song, movement and stylized acting techniques.
THE	2040	Theatre Practicum		Fall 2021	Significant and responsible participation in the department's production program.
THE	2051	Creativity	3	Fall 2021	Students from all disciplines experiment with creativity in their major and their work, utilizing theatre-based approaches to creating performances, stories, ads, business plans, films, and/or projects that nurture innovation, originality, and collaborati
THE	3007	Playwriting	3	Spring 2021	
THE	3011	Asian Theatre	3		To understand Asian artistic style and practice through viewing performances, examining aesthetics, and studying plays.
THE	3020	Teaching of Acting	3		A laboratory course for teachers of dramatic arts at the junior and senior high school levels. Emphasis is on the development of teaching skills, including exercises in movement, improvisation and scene study.
THE	3030	Spec Topics in Theatre	3	Spring 2021	A specialized area of theatre studies (e.g., avant-garde, feminist, Asian, Melodrama), combining elements of theatre history, dramatic literature and criticism, as well as performance and production aspects of live theatre.
THE	4010	Scenography	3		
THE	4011	Directing the Play	3	Fall 2021	Fundamentals of directing: script analysis, approaches to working with the actor, movement and blocking, visualization, design, and rhythm.
THE	4014	Women and Theatre	3		The contribution of women artists to the American theatre, discussing the particular social issues, and the pertinent historical perceptions and problems encountered by women in the arts.
THL	1000	Faith, Reason, and Culture	3	Fall 2021	Introduction to sources and major thinkers that have shaped responses to fundamental human questions that underlie all religions and shape the human search for meaning. Engagement of religious truth claims, themes, values, and witness as resources for ana
THL	1500	Spirituality & Healing Arts	3	Spring 2019	Discovery of practical spirituality through engaging select contemplative practices; deepening of individual spirituality and the discovery of the presence of God in practicing healing arts; exploration of connections with self, and patient, care; particu
THL	2460	Bible and Environment	3	Fall 2018	Exploration of biblical perspectives on the environment through a variety of key characters and their relation to the land and other creatures. Attention to historical treatment of the ecology in Christian and Jewish theology and engagement of contemporar
THL	2490	THM Biblical Studies	3	Spring 2021	Critical analysis of biblical themes, biblical theology, spirituality and ethics as well as their reception in history and in culture. Attention in theory and practice of exegesis and biblical interpretation. See department website for announcement of par
THL	2550	THM Contemporary Christianity	3	Fall 2018	Contemporary Christian writings, controversies, and events. See department website for announcement of particular themes.

THL	2590	THM Historical Theology	3	Fall 2021	Historical development of theology by topical or chronological arrangement. See department website for announcement of particular themes.
THL	2750	Augustine: Then and Now	3	Spring 2018	Exploration of connections between our time and culture and Augustine's time and culture; study of select sermons and letters of St. Augustine; comparison and contrast of 'snapshots' of moments in Augustine's experience with 'snapshots' from the 3rd mille
THL	2760	Augustine's Influence & Legacy	3	Fall 2016	Exploration of Augustine's influence on western theology - the nature of the human being, the existence of human freewill, the nature of human sexuality, the nature of grace, the role of Christ as Savior, the extent of God's salvific will for humanity.
THL	2780	THM Christianity in History	3	Fall 2016	Emergence, growth, and transformation of Christianity from its origins in the eastern Mediterranean to its worldwide expansion. Ways in which Christian symbolism and ritual have shaped the lives of ordinary people. Major writings, controversies, and even
THL	2900	THM Catholicism in the US	3	Fall 2021	Thematic issues in American Catholic experience and Catholic identity in the United States.
THL	3200	Understanding Jesus	3	Spring 2021	The historical Jesus and questions of method; christologies of the early Christian sources and councils; the later tradition of Christological reflection; contemporary trajectories.
THL	3250	THM Problem of Evil	3	Fall 2021	Formulations of the problem and historical attempts to solve it. See department website for announcement of particular themes.
THL	3400	Sacraments	3	Spring 2020	History of Christian sacraments; sacraments as celebrations of life in God; theology of worship as fulfillment of being human; present and future shapes of Christian liturgy; applications to particular sacraments, e.g., baptism, reconciliation, eucharist.
THL	3450	Pastoral Care of the Sick	3	Fall 2020	Treatment of theological understanding of the sacrament, anointing of the sick. Examination of primary texts on pastoral care from the Roman Catholic Church, and of the spirituality of caregivers. Pastoral-theological exploration of entire range of care p
THL	3740	THM Liberation Theologies	3	Spring 2021	Theologies emerging from specific struggles for liberation in Latin American, Africa, Asia, and North America; their context, content, and critique. See department website for announcement of particular themes;
THL	3790	THM Theological Studies	3	Fall 2021	Exploration of issues in theology. See department website for announcement of partilar themes.
THL	4200	Ethics of Life and Death	3	Fall 2021	Explorations of selected issues in biomedical ethics (e.g., abortion, euthanasia).
THL	4320	Markets and Morality	3	Spring 2017	Analysis of market economies - do they promote or stifle human welfare, freedom, and the common good? What does Christian discipleship require in the marketplace? Use of sources in Christian ethics, Catholic social thought, economics, and other discipline
THL	4330	Christian Environmental Ethics	3	Summer 2021	Examine foundational theological issues and major christian thinkers on the environment; in-depth study of synthetic chemical, agriculture, and treatment of animals; and weekly class discussions on various practical topics in environmental ethics.
THL	4480	Introduction Biomedical Ethics	3	Spring 2021	Development of tools for critical analysis of biomedical ethical issues. Reflection on ethical issues in society and personal lives. Focus on a distinctively Catholic Christian approach to these matters.
THL	4490	THM Christian Ethics	3	Fall 2021	Issues in Christian ethics. See department website for announcement of particular themes.
THL	4500	Augustinian Spirituality	3	Fall 2019	Study of spirituality of Augustine and of Augustinian spiritual writers and traditions.
THL	4550	The Contemplative Tradition	3	Fall 2021	Exploration of classical Christian teachings on silent prayer and meditation. Focus on both the theoretical understanding of the ancient practice of contemplation and its practice in daily life. Interdisciplinary approach through reading ancient Christian
THL	4990	THM Spirituality Studies	3	Fall 2021	Study of Christian and/or non-Christian spiritual voices, movements, traditions, or themes (western or non-western, local or global) in ancient, medieval, early modern, modern, or contemporary times. Exploration of relationship to theology, faith, culture
THL	5000	THM Religion	3	Fall 2021	Evolution and development of central themes or concepts in the academic study of religion such as visual culture; violence and conflict; politics; law; myth and/or ritual; interreligious dialogue. See department website for announcement of particular theme
THL	5001	THM Presence/Absence of God	3		Major seminar. Theism and the atheistic critiques of the nineteenth and twentieth centuries; the problem of God in western culture; contemporary retrieval of the doctrine of God as Trinity.
THL	5002	THM Major Thinkers & Ages	3		Major seminar. Christian thinkers from the early church through the twenty-first century.
THL	5003	THM Catholic Studies	3		Investigation of distinctive elements of Catholicism: ecclesiological, historical, sociological, moral, spiritual, theological, biblical, liturgical, among others.
THL	5004	THM Theology and Culture	3		Study of the mutual interplay between theology and culture and the practical ways in which theology and culture interact in various historical, political, social, and economic contexts.
THL	5005	THM Global Rel. Experience	3		Exploration of non-Christian religions, religions in non-Western regions of the world, religious beliefs and practices in a broader global context, or experiences deemed "religious".
THL	5100	THM Judaism	3	Fall 2021	Development of the religious tradition of the Jewish people; the Torah, the Talmud and other commentaries; Jewish ideals in ethnic literature. See department website for announcement of particular themes.

THL	5150	Islam:History,Thought,Culture	3	Fall 2021	History and development of Islam: beliefs, rituals, sects, and intellectual movements.
THL	5160	Islamic Mysticism	3	Spring 2021	Sources, development, principles, contribution, and influence of Islamic mysticism.
THL	5180	Islamic Political Thought	3	Fall 2020	Integration of Islamic philosophy, religion, political science and history; the state in pre-Islamic Arabia, the Qur'anic concept of the state, the crisis of succession, Muslim theorists, revival and reform.
THL	5200	Religion in Russia	3	Spring 2021	The history, mind, spirit and life of Russia Orthodoxy; its influence in its adherents in the modern, complex and pluralistic world.
THL	5270	Religion in India and SE Asia	3	Summer 2017	The doctrinal and social history of the religious traditions of India and Southeast Asia: Hinduism, Buddhism, Jainism, Islam and Sikhism; the role of these religious in contemporary Indian and Southeast Asian societies.
THL	5290	Hindus and Christians in India	3		A multi-disciplinary examination of the two-thousand-year history of encounter between Christians and Hindus, highlighting areas of commonality, difference, exchange, interaction and identity formation. Exploration of historical modes of engagement: anta
THL	5400	THM Science & Religion	3	Fall 2016	The interaction of science and religion from Galileo to the contemporary period. theological implications of recent developments in the natural sciences. See department website for announcement of particular themes.
THL	5410	Theology and Film	3	Fall 2020	Exploration of connection between theology and film and of the ways that filmmakers "do" theology. Survey of the literature on the subject and analysis of films and filmmakers that have demonstrated theological sensitivity and/or interest in theological q
THL	5420	Modernity and Crisis of Faith	3		Analysis of so-called "New Atheism" through the lens of Soren Kierkegaard. Exploration of Kierkegaard's diagnosis of this "crisis of faith" and his understanding of the religious life.
THL	5450	Religion, Art, and Science	3	Spring 2019	Study of religion, art, and science as aspects of persons and cultures. Exploration of theology and ritual as they relate to societies, cultures or persons; and the artistic (or aesthetic) dimension of religion, the scientific, and the personal.
THL	5800	Religion and Literature	3	Spring 2021	Religious attitudes and experience in contemporary literature.
THL	5820	THM Religion in America	3	Spring 2019	Religious thought, institutions, movements, symbols, performances, and lived religious experience in the Americas. See department website for announcement of particular themes.
THL	5999	Themes Faith and Culture	3	Summer 2021	Select topics on issues concerning the intersection of religion, society, and culture.
THL	6000	THM Theology or Religion	3	Fall 2021	Exploration of issues in religion or religious studies and theology or theological studies. See department website for announcement of particular themes.
THL	6001	Themes in Religious Studies	3		Themes in religious studies taken by Villanova students studying overseas.
THL	6050	Internship	3	Summer 2019	Supervised field experience in an approved setting (e.g., social service, teaching).
THL	6051	Internship	6	Summer 2018	Supervised field experience in an approved setting (e.g., social service, teaching).
THL	6300	Research Seminar	3	Fall 2019	Research seminar for TRS majors. Individual or group projects that participants design with the help of a faculty facilitator. Emphasis on active role in the learning process. Exploration of fields and topics of interest to students that connect theology
THL	6400	Independent Study	3	Fall 2021	Independent study restricted to TRS majors and minors. Permission of chairperson required.
THL	6500	Advanced Seminar	3	Spring 2019	Capstone experience for TRS majors. Consolidation and synthesis of knowledge gained in the research seminar. Preparation and delivery of student-lead conversations. Involves students communicating their explorations or discoveries. Includes a final product
THL	6600	Portfolio Review	0		Assessment of portfolio materials that document students' general, broad knowledge in their specialization.
UNIV	1000	COVID-19 Stnt Return to Campus		Fall 2020	
VAB	4000	Intro to Irish Studies Abroad	1		On the culture, history, politics of Ireland. Presentations by the Program Director, readings on Irish culture and society, and field trips. Required of all students participating in the summer abroad program at NUI Galway, Ireland.
VEXP	1000	The Leadership Experience	1	Fall 2021	Exploration of leadership and personal growth in first year college experience.
VEXP	1001	Health & Wellness	1	Spring 2021	A workshop style course stressing all aspects of health: social, physical, intellectual, career, emotional, and spiritual. Study and application of skills of health-conscious living; work with health and wellness professionals on campus including perso
VIA	3010	Indoor Air Quality/Hum Hlth	3	Fall 2020	Examine and analyze issues surrounding indoor air quality (IAQ) and human health using environmental science, biology, public health, and social, policy, and economic influences. Air pollution, health effects, economics, social, and cultural factors, in d
VIA	3020	Creating Social Impact	3	Spring 2021	Using interdisciplinary and sustainable innovations in the social impact sector to solve social problems. Become innovative problem solvers. Learn by doing via class discussions and hands-on projects to discover how to make social change now and as lifelo
VIA	3030	US Statesman:Lib/Eqty Com Good	3	Spring 2019	Economics and political philosophy applied to the history, theory, and practice of statemanship. In-depth study of important case studies focusing on how political leaders must balance competing political and economic interests in society for the sake of

VIA	3040	Global Soccer: History/Data	3	Fall 2021	This course will utilize methodologies drawn from history and data analytics to investigate soccer as a global phenomenon. Students will explore soccer history beginning in 1850 and develop the necessary coding skills to work in the R programming language.
VIA	3050	Building What Matters	3	Fall 2021	Introduction to the built environment and concentrate on sustainability and environmental challenges within the built environment. Introduction to central theory and concepts of sustainable planning and design of the built environment and technical approach
VS	0099	B2B:FR Experience		Fall 2021	Continuation of professional development activities to include but not limited to resume review, participation in networking etiquette interactive sessions and an intro to Handshake. Restricted to: VS Freshman Cohort
VS	1000	Information Technology	1	Fall 2021	On line course focuses on design and use of spread sheets to support decision making/problem solving.
VS	1015	Business Dynamics	3	Fall 2021	Explores dynamic nature of business in a changing environment. Cross functional view of business and contribution of functions to accomplish vision. Integrates global, ethical, and technological dimensions. Emphasizes innovation as business, personal skill
VS	1500	Special Topics in Business	1	Fall 2021	Contemporary issues and topics impacting the business environment.
VS	1600	Special Topics in Business	3		Introductory topics of interest in the business environment.
VS	2000	Backpack-to-Briefcase:SO Sem	1	Fall 2021	Professional development program combining class sessions and out-of-class activities focused on career exploration, job search skills, and development of soft skills.
VS	2004	Financial Accounting	3	Fall 2021	Course introduces generally accepted accounting principles and both the creation and analysis of financial statements. Students are exposed to the importance of accounting in making decisions such as those related to business, investing, and financing.
VS	2006	Strategic Info Technology	3	Fall 2021	Strategic alignment of business and information technology (IT); managing IT as a strategic resource; strategies for sourcing IT development and services.
VS	2007	Corp Respon & Regulation	3	Fall 2021	Examines law, ethics, corporate responsibility, and business regulation. Studies the sources, substantive principles, and evolving nature of law, and its role in ethical business decision making.
VS	2008	Business Analytics	3	Fall 2021	Use of business intelligence and quantitative methods, including statistical analysis, forecasting/extrapolation, predictive modeling, optimization and simulation in the context of organizational decision making and problem solving.
VS	2009	Principles of Finance	3	Fall 2021	The theory and techniques of financial management. Financial markets; financial statements and analysis; time value of money; interest rates; bond valuation; risk and return; equity valuation; cost of capital; capital budgeting; working capital management
VS	2020	Competitive Effectiveness	6	Fall 2021	Explores value creation for stakeholders and establishing competitive advantage; how goods/services are developed to meet customer/consumer needs and are distributed for consumption. Innovating, problem-solving, leading, and controlling through effective
VS	2030	Fin Mgt & Report I: Fin Acc	3	Fall 2016	Understanding business by being able to understand the financial statements. Accounting concepts, transaction analysis, analytical procedures, valuation and allocation, revenue recognition and expense matching, and cash flow analysis - operating, investin
VS	2040	Fin Mgt & Report II: Prin Fin	3	Fall 2016	The theory and techniques of financial management. Time value of money; risk and return; financial analysis and planning; working capital management, capital budgeting; cost of capital; strategic long term financing decisions. Restricted to School of Busi
VS	2121	Business Scholars Seminar	1	Spring 2021	Special business topics offered in a lecture/seminar format to prepare students for research opportunities. RESTRICTED TO: Permission of VS Honors Director
VS	2500	Personal Finance	3	Spring 2021	Critical personal finance skills for financial stability and success. Topics include: planning personal finances, money management and budgeting, tax strategies, investments, credit and debt, purchase decisions, insurance, retirements and estate planning.
VS	3000	Backpack-to-Briefcase:JR Sem	1	Fall 2021	Professional development program built around an internal case competition. Topics addressed include written and oral communication; business research; team dynamics and leadership.
VS	3006	Prin of Managerial Accounting	3	Fall 2021	How management accounting information can be used to help firms achieve strategic goals and profitability objectives. Use of an entrepreneurial perspective to examine how managers apply risk measurement and management techniques to business planning and c
VS	3008	Operations Management	3	Fall 2021	Concepts and techniques for problems in manufacturing and service organizations. Topics: decision-making, forecasting, resource allocation, project management, quality, materials management, technology and strategy.
VS	3500	Special Topics in Business	3	Fall 2021	Contemporary issues and topics impacting the business environment.
VS	3900	Innovation & Design Practicum	3	Fall 2021	"Design" is a systematic, human-centered approach to problem-solving used by decision-makers of the world's most innovative organizations (e.g., Google, Apple). by understanding what people want and need in their lives, designers iteratively test potentia
VS	4000	B2B: SR Leadership Academy	1		Professional development capstone course focusing on the understanding, importance and development of leadership skills; specific topics may vary.

