

VILLANOVA UNIVERSITY CATALOG

UNDERGRADUATE STUDIES 2009- 2011

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://www.villanova.edu/vpaa/office/catalog/> for more recent information as well as the web sites listed for the particular policies, programs and services found in this catalog.

Note to Users: Because Villanova University makes frequent changes in its individual course offerings we have not included the course descriptions in this version of the *Catalog*. An up-to-date listing of courses and course descriptions is available on-line at <http://www.villanova.edu/vpaa/office/catalog/>. Villanova University also publishes an expanded version of this *Catalog* that includes the course descriptions. To obtain a copy of the expanded version, contact the Admissions Office.

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VILLANOVA UNIVERSITY

August

2009

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 World-Wide 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, 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. Students who enter in fall 2010 or fall 2011 should check the world wide web catalog for changes. 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: 2009-2010

Fall Semester (2009)

Aug. 20-23 (Th-Sun)	New Student Orientation and Registration
Aug. 22 (Sat)	Saturday Classes begin for Part-Time Studies
Aug. 24 (M)	Classes Begin
Aug. 28 (F)	Last Day for requesting Satisfactory/Unsatisfactory
Aug. 30 (Sun)	Last Day for dropping and/or adding classes
Sept. 7 (M)	Labor Day – No Classes
Sept. 18-19 (Fri-Sat)	St. Thomas of Villanova Celebration
Sept. 25-27 (Fri-Sun)	Parents' Weekend
Oct. 9 (F)	Mid-Term
Oct. 12 (M)	Semester Recess
Oct. 19 (M)	Classes Resume
Oct. 21 (W)	Grades Due (Noon)
Oct. 23 (F)	Advising Begins
Oct. 23-25 (Fri-Sun)	Homecoming Weekend
TBA	Registration Begins for Spring 2010
Nov. 11 (W)	Last Day for Authorized Withdrawal without Academic Penalty (WX)
Nov. 24 (Tu)	Thanksgiving Recess Begins after last class
Nov. 30 (M)	Classes Resume
Dec. 8 (Tu)	A Friday Class Day – follows a Friday Schedule for UG Day Classes Only
Dec. 10 (Th)	Final Day of Classes
Dec. 11 (F)	Reading Day
Dec. 12-18 (Sat-Fri)	Final Examinations (No exams on Sunday)

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Spring Semester (2010)

Jan. 11 (M)	Classes Begin
Jan. 15 (F)	Last day for requesting Satisfactory/Unsatisfactory
Jan. 17 (Sun)	Last day for dropping and/or adding classes
Jan. 18 (M)	Martin Luther King Day (No Classes)
Feb. 26 (F)	Mid-Term
Mar. 1 (M)	Semester Recess
Mar. 8 (M)	Classes Resume
Mar. 10 (W)	Grades Due (Noon)
Mar. 12 (F)	Advising Begins
TBA	Registration Begins for Fall 2010
Mar. 31 (W)	Last Day for Authorized Withdrawal without Academic Penalty (WX)
Mar. 31 (W)	Easter Recess begins after last class
Apr 6 (Tu)	Classes Resume
Apr. 27 (Tu)	A Friday Class Day – follows a Friday Schedule for UG Day Classes Only
Apr. 28 (W)	A Monday Class Day – follows a Monday Schedule for UG Day Classes Only
Apr. 29 (Th)	Final Day of Classes
Apr. 30 (F)	Reading Day
May 1-7 (Sat-Fri)	Final Examinations (No exams on Sunday)
May 15-16 (Sat-Sun)	Baccalaureate and Commencement

ACADEMIC CALENDAR: 2010-2011

Fall Semester (2010)

Aug. 19-22 (Th-Sun)	New Student Orientation and Registration
Aug. 21 (Sat)	Saturday Classes begin for Part-Time Studies
Aug. 23 (M)	Classes Begin
Aug. 27 (F)	Last day for requesting Satisfactory/Unsatisfactory
Aug. 29 (Sun)	Last Day for dropping and/or adding classes
Sept. 6 (M)	Labor Day - No Classes
Sept. 10-11 (Fri-Sat)	St. Thomas of Villanova Celebration
Sept. 17-19 (Fri-Sun)	Parents' Weekend
Oct. 8 (F)	Mid-Term
Oct. 11 (M)	Semester Recess
Oct. 18 (M)	Classes Resume
Oct. 20 (W)	Grades Due (Noon)
Oct. 22 (F)	Advising Begins
Oct. 22-24 (Fri-Sun)	Homecoming
TBA	Registration Begins for Spring 2009
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. 7 (Tu)	A Friday Class Day - follows a Friday Schedule for UG Day Classes Only
Dec. 9 (Th)	Final Day of Classes
Dec. 10 (F)	Reading Day
Dec. 11-17 (Sat-Fri)	Final Examinations (No exams on Sunday)

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Spring Semester (2011)

Jan. 10 (M)	Classes Begin
Jan. 14 (F)	Last day for requesting Satisfactory/Unsatisfactory
Jan. 16 (Sun)	Last Day for dropping and/or adding classes
Jan. 17 (M)	Martin Luther King Day (No classes)
Feb. 25 (F)	Mid-Term
Feb. 28 (M)	Semester Recess
Mar. 7 (M)	Classes Resume
Mar. 9 (W)	Grades Due (Noon)
Mar. 11 (F)	Advising Begins
TBA	Registration Begins for Fall 2011
Mar. 30 (W)	Last Day for Authorized Withdrawal without Academic Penalty (WX)
Apr. 20 (W)	Easter Recess begins after last class
Apr. 26 (Tu)	Classes Resume
Apr 26(Tu)	A Friday Class Day – follows a Friday Schedule for UG Day Classes only.
Apr. 27 (W)	A Monday Class Day – follows a Monday Class Schedule for UG Day Classes only.
Apr 28 (Th)	Final Day of Classes
Apr. 29 (F)	Reading Day
Apr. 30-May 6 (Sat-Fri)	Final Examinations (No exams on Sunday)
May 14-15 (Sat-Sun)	Baccalaureate and Commencement

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 is presently known as the Part-Time Studies Division 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.

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

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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.

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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, Associate of Science in Natural Science.
- ❑ College of Engineering (www.engineering.villanova.edu): Bachelor of Science in Chemical Engineering, Bachelor of Science in Civil and Environmental Engineering, Bachelor of Science in Computer Engineering, Bachelor of Science in Electrical Engineering, Bachelor of Science in Mechanical Engineering.
- ❑ 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

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.

A student may receive only ONE degree, regardless of how many majors s/he accumulates. 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. -- must choose which degree to take. If a student has completed all the requirements for one degree and, in addition, by taking 43

or more additional credits beyond the greater of the two program credit requirements, fulfills the requirements for a second degree, he or she may receive two degrees and two diplomas. Otherwise, the student will receive only one. Multiple majors, regardless of college, will appear on a student's transcript.

PART-TIME STUDIES (www.parttime.villanova.edu)

Villanova offers the opportunity for part-time study to a variety of students who are not able or do not wish to enroll as full-time matriculated students. Students may pursue Bachelor's Degrees on a part-time basis in: Accountancy, Business Administration, Computing Science, Education (secondary), English, History, Human Services, and General Arts. Additionally, the Bachelor of Interdisciplinary Studies, a degree program for part-time adult students only, is offered with majors in Information Systems, Leadership Studies, Media & Technology, and General Studies. Details on these programs and requirements are to be found in the Part-Time Studies section of this Catalog.

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 the Computing Sciences Accreditation Board, a specialized accrediting body recognized by the Council for Higher Education Accreditation. 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). All five degree programs of the College of Engineering have been accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.

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 (www.augustinian.villanova.edu)

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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 306 Old Falvey.

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 SERVICES (www.careers.villanova.edu)

The Career Services Office assists individuals with assessing career interests, planning careers, and developing the skills to successfully pursue career plans. Career Services partners with academic advising in the four colleges to link career advising, internship programs, professional development, and placement services. Individual counseling is supplemented by workshops and career programs. Interest tests are administered and interpreted. Employment services include a campus interview program with over 350 employers, a resumé referral system, and a job listing service. The website provides extensive information on careers, materials on various job search topics, and registration information for graduate school admission tests. Staff counselors and career assistants look forward to working with you. The office is located in Corr 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 a semester average of 3.5 in the College of Engineering, 3.5 in the College of Nursing, 3.5 (for both semesters) in the College of Liberal Arts and Sciences, and 3.5 in the School of Business with no non-passing or missing grades on the semester report.

HONOR SOCIETIES (www.villanova.edu/academics/resources/)

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

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- ❑ Phi Beta Kappa (www.pbk.villanova.edu)/ 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 (www.students.villanova.edu/phikappaphi). Phi Kappa Phi is an honor society whose objective is the recognition and encouragement of superior scholarship in all academic disciplines.
- ❑ Alpha Sigma Lambda (www.villanova.edu/vpaa/parttime/about/alpha.htm). 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 (www.unit.villanova.edu)

The Office for University Information Technologies (UNIT) provides computing, information, and network services to the entire campus community. A campus-wide network for data, voice, and video communication provides phones, data and cable TV connectivity for students, faculty, and staff. Phone, cable and high-speed data connectivity is extended to all residence hall rooms. Citrix and VPN service 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 in Mendel and Tolentine, and the Connelly Center and Mendel lounges, totaling over 170 workstations. The labs are open 18-24 hours a day with consultants on duty to assist students. All computers support general-purpose applications such as word processing, spreadsheets, graphics and data base management systems (Microsoft Office suite) plus course-specific software.

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, video and audio streaming studios, video teleconferencing, web and podcasting and access to Internet 2. All 100+ classrooms are equipped with cable TV and internet access, wireless and multi media teaching technologies.

The TechZone located in Vasey Hall assists students with University provided laptop computers. Technical support is complemented by Web based documentation. In addition to the TechZone, UNIT operates the University Help Desk and provides technical support and service from 8am to 8pm M-F by calling (610) 519-7777.

User-ids are assigned to students prior to their arrival on campus that provide access to email and other student designated computing resources. All students have a default Web page created for them and a personalized portal gives them 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 students with a smart card (WildCard). The Wildcard is a photo identification card that is required for all Villanova students, faculty and staff. The Wildcard allows convenient, effective, and secure access to all card related services. These services include personal identification, facilities access and access monitoring, debit transactions processing, 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.

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Nova Alert is a text messaging feature that enables campus public safety officers and university officials to send targeted alerts to its 10,000 students and faculty members in a matter of seconds. Nova Alert is designed to communicate an emergency with immediate danger, 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, pagers, smart phones and PDA devices. (Note: Parents can sign up for alerts, too.)

INTERNATIONAL STUDIES (www.villanova.edu/vpaa/intlstudies/)

Each year hundreds of Villanova students go overseas for a summer, a semester, or a year to continue their academic work. Villanova offers students a wide variety of different locations around the world to choose from and programs for Engineering, Nursing, Business, and Arts and Sciences. The Office of International Studies helps students identify opportunities and facilitates the process of enrollment in overseas programs. Visit our website, drop by our office in Middleton Hall, or give us a call at (610) 519-6412.

LEARNING COMMUNITIES

(www.villanova.edu/studentlife/learningcommunities)

Villanova's learning communities create innovative educational environments that integrate the academic, co-curricular, and communal aspects of the student's first year of college.

- the intentional pairing of a student's academic course assignment in the *Augustine and Culture Seminar* (a class all freshmen take) and the student's housing assignment.
- the opportunity to form a close community inside and outside of the classroom, with faculty, hall mates and classmates.
- an option to explore a theme or interest of the students in the first year seminar and living with people who share that interest.
- a holistic integrated approach to a student's intellectual, personal, social, moral, and spiritual development.

Examples of themes/interests are Leadership Experience; Citizenship for a Diverse World; Healthy Living; Environmental Leadership; Global Community; Justice: from

Adam to Eve; Politics of Freedom; and ACT: Arts, Culture, Theater. Commuter sections of Leadership Experience and ACT: Arts, Culture, Theater, are also available.

LEARNING DISABILITIES (www.learningsupportservices.villanova.edu)

The Office of Learning Support Services, in conjunction with faculty, is committed to providing “reasonable academic accommodations” for students with learning disabilities, other neurologically based disorders, and those disabled by chronic illnesses. 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.

It is the responsibility of the student to submit for review current documentation of their disability to Learning Support Services. Reasonable academic accommodations and support services 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. Students must obtain a new accommodation request form for each term at Villanova in order to receive accommodations during the term.

The Office of Learning Support Services is located on the second floor of Kennedy Hall. For additional information about our services, contact 610-519-5636.

LIBRARY RESOURCES AND SERVICES (www.library.villanova.edu)

Falvey Memorial Library is the gateway to academic information resources and services for students, faculty and staff. The physical library collection includes more than 750,000 printed volumes including books and historical runs of major academic journals. Web-accessible resources include approximately two hundred twenty general and discipline-specific research databases, approximately ten thousand full-text electronic journals, and extensive microfilm and audiovisual collections. Online collections also include almost 500,000 digital volumes encompassing the corpus of English-language books from the earliest days of the movable type printing press through the early 19th century. Beyond Villanova’s collection, the regional EZBorrow system in which the university participates provides one-stop searching and access to over 35 million books from academic libraries across Pennsylvania and New Jersey. In addition, materials can be requested from libraries world-wide through interlibrary loan. With Pulling Law Library, Falvey shares in a selective depository status for federal government documents.

The historical record of Villanova University is available in University Archives on the fourth floor. Special Collections, located on the second floor, has examples of early printed books, the Joseph McGarrity Irish Studies Collection, Early Catholic Americana, and the Augustiniana Collection. Many rare and unique items from Special Collections are also accessible via the Villanova University Digital Library.

The library provides a wide range of services to the university community, including reference and research assistance, interlibrary loan, course reserve materials (print and digital), and the acquisition, organization and maintenance of print & online collections pertinent to university curricula and research activities. Web accessible

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library resources include VUFind (the online catalog), general and scholarly research databases and full-text journals and e-books, e-mail request forms, interactive (chat-based) reference assistance, and subject-oriented research guides. Approximately 80 public workstations are available in the library, for searching the Web, sending and reading email, and using a wide variety of university-licensed software. The library also provides wireless network access, laptop PCs for in-library use, and ports for connecting personal laptops to the network at a variety of locations throughout the building.

Unique study opportunities are also available at Falvey Library, including a “learning café” with food and beverage service (Holy Grounds) and 24-hour accessibility for students. Throughout the building, comfortable couches and chairs which complement the tables and carrels are available for individual study. The Kolmer Group Study Rooms are available on the third and fourth floors.

In addition to its primary mission of supporting the academic needs of students and faculty, the library also provides a wide range of “co-curricular” intellectual and cultural programming to the campus, including a lecture series that brings distinguished speakers into the stacks for informal talks, book and research talks at which faculty present the fruits of their intellectual labor to the Villanova community at large, occasional literary readings by regional and national poets and writers, and annual presentations of distinguished undergraduate research.

MATHEMATICS LEARNING AND RESOURCE CENTER

(www.villanova.edu/mlrc)

The Mathematics Learning and Resource Center (MLRC) provides an environment where students can obtain help with freshman and sophomore level math classes, work on group projects, study independently, and use computer lab facilities. The MLRC computer lab has 13 computers capable of running the mathematical software currently being used in math courses offered at Villanova. There is also a comprehensive collection of tutorial software and a modest video library and three TV/VCR stations, which students may use for independent learning. The Center is located on the second floor of Old Falvey, tel. (610)519-MLRC or (610)519-5193 for voice mail messages.

NATIONAL SCHOLARSHIPS

(www.villanova.edu/artsci/college/academics/curf)

Villanova University provides comprehensive advisement for students who pursue prestigious national scholarship and fellowship opportunities, including the Truman, Goldwater, Udall, Fulbright, Marshall, Rhodes, Gates Cambridge, and National Science Foundation. A mentoring program is administered by the Center for Undergraduate Research and Fellowships and begins as early as an undergraduate student’s first year. In recent years, over seventy students have received formal recognition from these various national scholarship programs.

ROTC (www.nrotc.villanova.edu or www.armyrotc.villanova.edu or www.sju.edu/academics/cas/afrotc/index.html)

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.

WRITING CENTER (www.writingcenter.villanova.edu)

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 the Dalton Room (202 Old Falvey); Phone: (610)519-4604.

CAMPUS PROGRAMS AND SERVICES

ART GALLERY (www.artgallery.villanova.edu)

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. The Gallery also enhances the educational experience by collaborating with academic departments in offering exhibits such as carved masks and totems from the Yoruba culture of West Africa, watercolors from China, Batiks from Byelorussia, and paintings by contemporary artists of the Caribbean. Free public outreach programs include hands-on art workshops for under-served children, young people and adults.

ATHLETICS AND RECREATION (<http://villanova.cstv.com/>)

Villanova student-athletes compete in eleven varsity sports for men and thirteen varsity sports for women. Faculty, staff and students have access to fitness centers, intramural and extramural competition in a wide variety of sports, swimming, and club sports (see www3.villanova.edu/recreation).

CAMPUS MINISTRY (www.campusministry.villanova.edu)

Reflecting the traditions of Roman Catholic and Augustinian spirituality, the Villanova Campus Ministry engages every aspect of University life through prayer, liturgy, community service, leadership development, and pastoral care. More specifically, Campus Ministry:

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- ❑ Offers programs centered on Christian living, social justice, liturgy, and preparation for the sacraments with an emphasis towards creating and eliciting Christian community on campus;
- ❑ Works with all members of the Villanova community to build spiritual awareness and growth, initiates programs in response to the gospel values of the Catholic Christian tradition; and
- ❑ Encourages the development of student leadership as a priority reflecting the student's significant role both now and for the future of the Church and society.

Campus Ministry is located on the lower level of St. Rita's Hall. Regular weekday office hours are 9 a.m. to 5 p.m. Appointments can be made in person or by phoning 610/519-4080. A recorded message giving the schedule of Liturgies is available at 610/519-4080. Detailed information on Campus Ministry activities, including programs for community service and leadership and for student involvement in liturgical celebrations, and information concerning other religious denominations' services and locations, can be found on the website and in *The Blue Book: The Villanova University Student Handbook*.

COUNSELING CENTER

(<http://www.villanova.edu/studentlife/counselingcenter/>)

The University Counseling Center, located on the Main Floor of the Health Services Building, offers psychological counseling, groups, consultation, referral, and study skills counseling. 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; 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 psychologist specializing in substance abuse counseling.
- ❑ 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.
- ❑ Study Skills Counseling. The study skills counselor helps students enhance their ability in the areas of: note taking; class preparation; test preparation; test taking; and time management. Individual appointments are available, as are group workshops on topics of common interest.

CRISIS RESPONSE SERVICES

(www.villanova.edu/studentlife/crisisresponse)

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.

OFFICE OF HEALTH PROMOTION (www.villanova.edu/healthpromotion)

The mission of Health Promotion at Villanova University is to:

- Provide evidence-based health resources;
- Facilitate opportunities for students to build skills that empower them to make healthy lifestyle choices; and
- Instill a sense of personal responsibility for individual health and its impact on the health of the community.

Health Promotion fulfills its mission through its campus-wide programming, first year learning community, POWER peer education and academic internship program, communication vehicles such as Stall Street Journal and HealthBytes, web and print resources, one-on-one consultation, and free non-credit courses in healthy eating and exercise. 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 visit our web site.

INTERNATIONAL STUDENT SERVICES (www.students.villanova.edu/iss)

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. NOTE: Villanova University requires that all full-time students have health insurance.

The International Student Services Office offers ESL courses through the office of Continuing Studies. Classes are offered in the fall, spring, and summer terms. In addition to ESL courses, the office has a dedicated ESL Helpdesk to aid non-native English speakers with writing and presentations.

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).

MULTICULTURAL AFFAIRS (www.multiculturalaffairs.villanova.edu)

The Center for Multicultural Affairs works to enrich the Villanova undergraduate learning experience by making available to all students the opportunity to engage in a rich variety of activities promoting cross-cultural awareness and understanding. We accomplish this task by offering learning resources and structured learning experiences to the entire Villanova University community. Our ultimate goal is to help all Villanovans learn to live empathetically in community with one another. The Center for Multicultural Affairs is located in Dougherty Hall, Room 102; call (610) 519-4075.

The main programs are:

- ❑ **Academic Advancement Program (AAP)/Act 101:**) The purpose of this program is to provide an educational opportunity for students from Pennsylvania who meet the academic and economic criteria established by the Higher Education Opportunity Act of 1971, legislatively designated and publicly known as Act 101. The AAP admits highly motivated students whose high school credentials suggest that they can, with academic support, successfully matriculate at Villanova University. At Villanova, these students are given support in counseling and tutoring to enable them to demonstrate their potential to succeed in college. The pre-college component offers a three-credit freshman English course, math, reading/study skills, general sciences classes, and critical thinking workshops. 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):** The Center for Multicultural Affairs offers comprehensive integrated services to all in-coming students. The ACTIVE program is designed to help students make the transition between high school and college successfully. In Phase One, *Freshman Retention*, the program is intended to help students develop an academic plan through a review grades and teacher feedback, tutoring, and counseling (academic, personal and financial). In Phase Two *Sophomore Engagement* the programs help students develop strategies for academic and personal success. Topics for discussion include: selection of major, cultivating leadership potential and communication skill development. In addition to course specific tutoring, students are guided to begin thinking about plans for their future including careers, graduate school, and internships. Anyone seeking information about this program should call Charisma Presley at 610-519-7316.
- ❑ **St. Thomas of Villanova Scholars Program (STOVs):** The purpose of STOVs is to retain and graduate students entering Villanova University whose academic career will be enriched by access to coordinated services designed to facilitate academic success and timely graduation. The program begins with a rigorous three-week summer academic emersion program. Once the school

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year begins, the academic progress of STOV students is monitored with follow-up programs and services provided. For more information about the program call Kristina Ruiz Mesa at 610-519-3894.

- **Student Outreach and Diversity Initiatives:** The Center for Multicultural Affairs 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 make contact with Assistant Director Charisma Presley whose office is located in Dougherty 102, tel. 610/519 7316.

MUSIC ACTIVITIES (www.music.villanova.edu)

The Music Activities Office promotes, maintains, and supervises the efforts of student performing groups on the Villanova campus. These groups include: the University Bands (Concert, Marching, Pep and Jazz); Orchestra; Twirlers; Dance Team; Flag Squad; Villanova Singers; Villanova Voices; Gospel Ensemble; Chamber Choir; Dance Ensemble; Nova Jhoom and Nova Dhadkan (Indian dancers); Student Musical Theater and Student Theater. Each organization is under the musical direction and supervision of a staff professional. Information about musical opportunities can be obtained by contacting the Music Activities Office on the lower level of St. Mary's Hall (610/519-7214).

OFFICE OF DISABILITY SERVICES

(www.villanova.edu/studentlife/disabilityservices/responsibility.htm)

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 Disabled Student Advisor to request accommodations (call 610-519-4095). The office is located on the second floor of the Connelly Center.

RESIDENTIAL FACILITIES (www.reslife.villanova.edu)

The University maintains a variety of living facilities which are intended to serve as extensions of Villanova's learning environment. Approximately 4400 students are housed on-campus across 18 traditional residence halls and 8 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. Transfer students are not guaranteed on-campus residency, but may request to be placed in University housing on a space-available basis. The University leases a residence hall at Rosemont College in an effort to accommodate students (seniors and transfers) who desire housing, but are not otherwise eligible to reside on the Villanova University campus.

All housing contracts are for a full academic year. Students who terminate their housing contracts prior to the end of the academic year, but who remain enrolled at the University will be assessed a Cancellation Fee of \$300. The fee is not applicable in the case of official withdrawal, removal by way of formal judicial action by the University or for departure due to participation in a study abroad program.

More information on residential facilities may be obtained by contacting Residence Life, Kennedy Hall (610-519-4154) or by visiting our website.

STUDENT DEVELOPMENT (www.villanova.edu/studentdevelopment)

The Office of Student Development oversees the administration of over 100 student organizations at Villanova. Its aim is to provide a co-curricular program emphasizing leadership skills in order to help co-ordinate students' free time with their study and education. These organizations foster common interests among students and assist students in gaining leadership skills that complement the skills learned in the University academic programs. The interest areas represented at Villanova include: governance, programming, publications, politics, fraternities and sororities, academics, cultural activities, honor societies and special interest groups (yearbook, radio station, tech crew, etc.) A complete listing of organizations and information on how to join can be found in the Office of Student Development, 214 Dougherty Hall (610/519-4210).

STUDENT HEALTH SERVICE (www.villanova.edu/healthandwellness)

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. The Health Center is located in the Health Services Building, second floor.

STUDENT ORGANIZATIONS (www.students.villanova.edu)

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.

TRANSCRIPTS (www.villanova.edu/enroll/registrar)

Students may obtain transcripts of their records from the Office of the Registrar, Tolentine 202, either in person, by writing to the officer via their NOVASIS account. Telephone requests cannot be accepted. Two weeks' notice is required. Official transcripts bear the seal of the University and the signature of the Registrar. Those given or mailed 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.

UNIVERSITY SHOP (www.ushop.villanova.edu)

The Villanova University Shop is the institutionally owned on-campus provider of retail services for Villanova University. Our merchandise mix supports the academic pursuits and cultural life of the University community and includes: course books, reference and trade books, insignia sportswear and gift items, personal and convenience products and academic supplies.

VETERANS (www.villanova.edu/enroll/registrar)

The Registrar's Office (Room 202, Tolentine Hall) serves as a liaison between the University and the Veterans Administration, except in the case of Law students who deal with the Law School Registrar.

Students (veterans) who will be enrolling in the college for the first time must contact the Office of the Registrar to file their application with the Veterans Administration. After the student has registered for the appropriate courses, the enrollment certification will be forwarded 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 from the Office of the Registrar. The veteran must submit the completed form together with the course information to the

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Office of the Registrar. The enrollment certification will then be forwarded to the Veterans Administration to secure payment of benefits to the veteran.

ADMISSION

(www.admission.villanova.edu)

GENERAL POLICY ON 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 courses chosen in high school and the quality of performance; rank in class (where rank is reported); scores earned on such nationally standardized tests as the SAT and ACT (which must include the Writing section); participation in extracurricular and community service activities; guidance counselor recommendation; and the student essay.

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, age, physical disability or family financial status. There are no quotas for any of the groups mentioned, but in selecting candidates whose academic qualifications are approximately equal, some preference may be given to children of alumni or faculty/staff members, athletes and residents of geographical areas not strongly represented in the student body.

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 for the college to which they make application. As used here, a unit represents a year's work in any subject.

College of Liberal Arts and Sciences

For Liberal Arts Curriculum:

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

For Science and Mathematical Sciences Curricula:

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

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Villanova School of Business

English	4	Science	1
History	2	Electives	5
Mathematics	4		

College of Engineering

English	4	Physics	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 (www.healthprofessions.villanova.edu)

Villanova University has accelerated Health Science Affiliation programs with a number of institutions including the Drexel University School of Medicine, Thomas Jefferson University College of Health Professions, the University of Pennsylvania School of Dental Medicine, and Salus University. Applications to these programs must be received by the Office of University Admission no later than November 1. The SAT must be taken no later than October of the senior year, and the ACT must be taken no later than September of the senior year for consideration for these programs. These programs are only available to U.S. citizens and permanent residents and are not available to transfer students.

EARLY ACTION

Early Action admission is awarded to those exceptional students who have outstanding high school records 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 taken no later than October of the senior year or ACTs taken no later than September of the senior year.

For Early Action, the completed application must be received by the Office of University Admission no later than November 1. Early Action selectees will be notified

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by December 20. These applicants need not apply only to Villanova. Deferred applicants will also be notified and will be reconsidered in the Regular Decision applicant pool. The Committee on Admission reserves the right to admit or defer any candidate for Early Action.

REGULAR DECISION

Applicants for Regular Decision may submit their credentials any time after the start of the senior year. The completed application must be received by the Office of University Admission no later than January 7. Applicants for Regular Decision will be evaluated on the basis of their three-year high school record (to include senior mid-year grades) and their scores on the SAT or ACT taken by December of their senior year. All information in support of an applicant's candidacy for admission should be on file by January 7. Every effort will be made to notify all applicants by April 1 of the following appropriate decision: acceptance, waiting list, denial, scholarship award, loan assistance and/or grant-in-aid. To secure a place in the class, accepted students must submit a non-refundable registration deposit of \$700 postmarked no later than May 1.

Students who are admitted as resident students and pay the \$700 deposit by May 1st are guaranteed three consecutive years (freshman, 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. All deposits must be postmarked no later than May 1. 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 Supplement by the appropriate deadline at www.commonapp.org. (This includes the submission of the Common Application and Villanova essay along with the \$75 application fee. Villanova participates in the College Board's fee waiver program.)
- ❑ 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 University Admission (on-line submission is preferred and will expedite to processing of the student's application, but paper copies can be processed). The completed application must be received by Villanova no later than November 1 for Early Action and January 7 for Regular Decision consideration.
- ❑ Take the SAT or ACT (which must include the writing section) and have the results sent to Villanova University (CEEB Code -2959 or ACT code-3744)

ACADEMIC ADVANCEMENT PROGRAM

In conjunction with the State of Pennsylvania, Villanova University considers applicants from Pennsylvania for admission under its Act 101 (Academic Advancement Program). The purpose of the Act is to provide an educational opportunity for students from Pennsylvania who meet the academic and economic criteria established by the Higher Education Opportunity Act of 1971, legislatively designated and publicly known as ACT 101.

TRANSFER STUDENTS

(www.villanova.edu/enroll/admission/overview/transfer.htm)

Candidates for admission who have attended other colleges and universities should submit applications for transfer to the Office of University Admission of Villanova University no later than June 1 for the fall and November 1 for the spring semester.

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 (Transfer Applicant Evaluation), 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 into the College of Liberal Arts and Sciences and the Villanova School of Business. Students interested in transferring into the College of Nursing and the College of Engineering must have maintained at least a 2.50/4.00 cumulative grade point average.

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. In the College of Liberal Arts and Sciences a cumulative average of 3.00 and two semesters at the previous institution are prerequisites for acceptance. 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. With the permission of the College Dean, study as part of an approved International Studies program may count towards the residency requirement.

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.

PRE-MATRICULATED COLLEGE CREDIT

College-level work completed prior to high school graduation may be awarded transfer credits upon receipt of the following: (1) an official letter from the high school principal, guidance 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; and (3) an official, seal-bearing transcript from the college/university showing a grade of C or better. **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.

INTERNATIONAL STUDENTS

Villanova University admits to its undergraduate program citizens from other countries who meet the appropriate criteria. International students are accepted to begin their studies in the fall semester only. The final date for receipt of the application for undergraduate students is January 7.

To be considered for acceptance, international students must fulfill all the requirements of immigration, 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 85 on the iBT (internet based), 213 on the CBT (computer based), or 550 on the paper based TOEFL; or a band score of 7.0 on the IELTS.

All undergraduate international students should note that they must pay a non-refundable tuition deposit determined by the Office of University Admission after acceptance and submit a certification of finances form prior to the issuance of the I-20 form. International students are eligible to compete for most merit-based and athletic scholarships. Need-based financial aid is available to first-time freshman international students from University sources on a limited basis.

ADVANCED PLACEMENT AND INTERNATIONAL BACCALAUREATE PROGRAMS

Villanova recognizes advanced placement from the College Board's Advanced Placement program (AP) and from the International Baccalaureate program (IB). Students who have taken these courses should report to their College Dean's office to verify Villanova's receipt of the scores, and 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 but without a grade. In some cases, the Advanced Placement or

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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: American History (07); Art (14 or 15); Art /Art History (13); Biology (20); Calculus (66 or 68); Chemistry (25); Computer Science (31 or 33); Economics (34 or 35); English (36 or 37); Environmental Science (40); European History (43); French (48 or 51); German (55); Latin (60 or 61); Physics (80 or 82); Political Science (57 or 58); Psychology (85); Spanish (87 or 89); Statistics (90). A grade of 3 or higher is awarded credit as follows: Arts and Sciences and Engineering, tests 31, 66, 68; Villanova School of Business 68, Nursing, tests 07, 25, 31, 43, 66, 68, 80, 82. Chemistry majors only receive credit for a score of 5 in test 25.

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; German A; History: Americas; History: Europe; Latin; Mathematics; Mathematics Further; Music; Philosophy; Physics; Psychology; Spanish A. Students also receive credit for a 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 450, 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.

TUITION AND FEES, 2009-2010

(www3.villanova.edu/budgetoffice/rates)

UNDERGRADUATE COLLEGES AND PROGRAMS

TUITION (Per Year) ¹

NOTE: All entering freshmen will be issued a laptop computer and software. This cost is included in tuition. At the conclusion of the sophomore year this computer will be returned and during the summer the student will receive a new laptop computer and software. Upon completion of the degree program the second laptop will become the property of the student.

	Tuition	Per Credit Rate	General Fees *	Student Health Fees
First Year - All Colleges	\$38,240	\$1,595	\$300	\$280
Second Year - All Colleges	\$38,240	\$1,595	\$300	\$280
Third Year - All Colleges	\$37,210	\$1,555	\$300	\$280
Fourth Year – All Colleges	\$37,210	\$1,555	\$300	\$280

FEES

Application Fee (Non-refundable)	\$75
Tuition Deposit (Non-refundable) (Deposit due upon acceptance; credited to account upon registration)	\$700
Orientation Fee (New Students only)	\$150
Student Health and Wellness Fee	\$140/semester
General University Fees	\$150/semester
Nursing Pre-Licensure Exam Fee (Sophomores, Juniors & Seniors)	\$95/semester
Room (Depending on Accommodations)	\$2,395-3,475/semester
Board (Depending on Meal Plan)	\$1,200-2,660 (\$620-990 for commuters) /semester
Reinstatement Fee	\$250
Late Payment Fee ²	\$100
Returned Check Charge	\$30
Monthly Service fee for Past-due Accounts	\$5/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.

Students may be billed for tuition and related costs up to the week before in-person registration. However, payments are due no later than the first day of class. This requirement applies to all students, including those who register too late to receive a 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.

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

PART-TIME STUDIES, TUITION AND FEES, 2009-2010

Application Fee (Non-refundable)	\$25
Tuition (Evening Courses Only):	
Liberal Arts, Education	\$460 (per credit)
Science, Nursing, Non-matriculated, Visitors, Post graduates	\$460(per credit)
School of Business ¹	\$500 (per credit)
Tuition (Day Courses Only 1-11 Credits) ²	
Liberal Arts	\$710 (per credit)
School of Business	\$735 (per credit)
Science, Nursing, Non-matriculated, Visitors, Post graduate	\$710 (per credit)
General University Fee	\$ 15/semester
Technology Fee ³	\$100/semester
Reinstatement Fee	\$250
Late Payment Fee ⁴	\$100
Monthly Services Fee for Past-Due Accounts	\$5/month
Returned Check Charge	\$30
Parking Fee ⁵	\$50

¹ Beginning Fall 1999, a technology curriculum was instituted for all evening business administration and accountancy majors. Rental of a notebook computer is included in the tuition fee. Contact Part-Time Studies for details.

² Any student carrying 12 or more credits of all day classes or 12 or more credits of any combination of day/evening classes will be charged the full-time undergraduate fourth year rate which is listed above.

³ For Non-matriculated and Post-graduate students taking business courses. Includes rental of notebook computer.

⁴ A Late Payment fee is charged to any account which is not paid in full by the official first day of class.

⁵ 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.

FINANCIAL ASSISTANCE

(www.finaid.villanova.edu)

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 grants, loans, and student employment. In addition to these need-based programs, Villanova offers several merit-based scholarships which are granted irrespective of students' needs.

SCHOLARSHIPS

Listed below are scholarship programs awarded by the University to entering freshmen. The academic requirements for these scholarships can be found on the web page for the Office of Financial Assistance (www.finaid.villanova.edu).

Presidential Scholarships. The Presidential Scholarship is awarded to students who have demonstrated academic achievement and active participation in their school and the broader civic community. **Beginning with the 2010-2011 entering freshman class**, successful candidates are awarded this renewable scholarship, which covers tuition, general fee, room, board (19 meal plan) and books for eight consecutive semesters. Students must be nominated by the chief academic officer of their high school (principal, president, headmaster) 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 student 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, with consideration given to a student's demonstrated financial need. 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 2009 entering freshman class was 4.23 (on a 4.00 scale) and the average combined SAT score (Critical Reading and Math) was 1460 with ACT scores that were similar in competitiveness.

Villanova Scholarships. Each year candidates to each of the four colleges (Liberal Arts & Sciences, Engineering, Nursing, and the Villanova School of Business) are reviewed by a scholarship committee in order to identify recipients of the Villanova Scholarship. This scholarship is awarded on the basis of academic achievement with a preference given to students who have a demonstrated financial need. This competitive program provides partial tuition scholarships that are renewable for a total of eight regular semesters. Based on the most recent applicant pool (students enrolling as freshmen in the Fall, 2009 semester), scholarship candidates will need to achieve a combined minimum of 1350 on the mathematics and critical reading or verbal portions of the SAT (with a minimum score of 650 in each of the portions of the test) or an ACT composite score of 31 and have a grade point average of at least a 3.80 on a 4.0 scale to

be eligible for consideration. All grade point averages are taken cumulatively from the end of the sixth semester, and all SAT or ACT scores must be received by January 7. Recipients of the scholarship will be notified on or before April 1.

Commuter Scholarships. Partial tuition scholarships are awarded each year to outstanding students commuting from their families' homes that have demonstrated superior academic achievement and have exemplary SAT or ACT scores with a preference given to students who have a demonstrated financial need. Candidates for the Commuter Scholarship must apply to the University as commuting students to be eligible for consideration. A scholarship committee reviews qualified applicants, and recipients will be notified on or before April 1.

Presidential Scholarships for Underrepresented Students. Each year a number of Presidential Scholarships are awarded to students from populations historically underrepresented as members of the student body at Villanova who have demonstrated leadership in their ability to make significant contributions to the academic and social cultures within their schools and communities. The cost of textbooks, and room and board charges (up to the 19 meals-per-week plan) for eight consecutive semesters also will be included.

For more information regarding the Presidential Scholarship Program, visit the following web sites: Office of Undergraduate Grants and Awards and The Center for Multicultural Affairs. For more information regarding the Program's particular commitment to enrolling Underrepresented Students, contact the Center for Multicultural Affairs at 610-519-4075.

St. Martin de Porres Grant. Villanova University provides grants valued at full tuition and general fees. Grant recipients are from the Greater Philadelphia area and are members of the most underrepresented groups in undergraduate education, including (but not limited to) members of underrepresented racial and ethnic populations, students from economically disadvantaged backgrounds, and student from families in which few or no members have attended college. The Greater Philadelphia area 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.

McNair 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 semesters, will be awarded every four years to an entering freshman 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.

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 is made to students 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 valued at \$12,500 per year will be granted to an entering freshman. This

scholarship is renewable for a total of eight consecutive regular semesters. Returning undergraduate students will be considered for scholarship renewal on the basis of their academic performance and financial need. In order to apply for the scholarship, candidates must complete The Common Application for Undergraduate Admission and the Villanova Supplement for Undergraduate Admission. In addition, candidates must complete a Goizueta Scholarship application and submit it to the Office of University Admission by February 7. The selection committee will review qualified applicants and will notify the recipient by April 1.

STUDENT FINANCIAL AID

To apply for all types of student aid (federal, state and institutional), prospective students beginning with the 2010-2011 entering freshman class must file the Free Application for Federal Student Aid (FAFSA) and the College Scholarship Services (CSS) Financial Aid PROFILE. To receive priority consideration for financial aid, applicants must file the FAFSA by February 1st. Additionally, signed copies of the student's and custodial parents' and stepparent's (if applicable) prior year U.S. or Puerto Rico Tax Returns, W-2 form(s) and 1099 form(s) must be submitted to the Office of Financial Assistance by February 1st. Late applicants will be aided only if funds remain available.

All returning undergraduate students wishing to reapply for federal, state or institutional financial aid must file the Renewal FAFSA. Returning students who are new financial aid applicants must file an original FAFSA. Both new and renewal applicants who are not Pennsylvania residents should file the appropriate application for State Grant consideration in their home state. All returning students must also complete the Villanova University Institutional Financial Aid Application (available through the Office of Financial Assistance website) and return it to the Office of Financial Assistance (Kennedy Hall, second floor) with signed copies of the student's and custodial parents, and stepparent's (if applicable) prior year U.S. or Puerto Rico Tax Returns, W-2 form(s) and 1099 forms by April 30. Late applications will be aided only if funds remain available.

Throughout the application process students are encouraged to check on the completeness and status of their application via MyNOVA. Additionally, award eligibility is posted to MyNOVA. Returning Undergraduate and Graduate students will be sent an email indicating their award is available to be viewed on MyNOVA. Freshmen will be sent their original award letter via regular mail but once students enroll all subsequent notices will be sent via email.

Additional information regarding the financial assistance process may be obtained via the Office of Financial Assistance website at www.finaid.villanova.edu. 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 is an institutional grant based on financial need. 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. Villanova University Grants are awarded for four academic years (eight terms) and are not applicable for the summer term. This award can be applied only to charges billed by Villanova University.

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.

Federal Supplemental Educational Opportunity Grant (SEOG). This is a federal grant administered by the University based on financial need. Only undergraduate degree candidates are eligible. All Villanova University students must complete the an initial FAFSA or the Renewal FAFSA to be considered for this program.

Federal Academic Competitiveness Grant (ACG). Federal ACG provides grant assistance to first and second year students who are enrolled at least half-time are eligible for a Federal Pell Grant, and who had successfully completed a rigorous high school program as determined by the state or local education agency and recognized by the Secretary of Education. Second year students must also have maintained a cumulative grade point average (GPA) of at least 3.0. Federal Pell Grant recipients who meet the requirements for the Federal ACG program will be notified during the academic year of their eligibility.

Federal National Science and Mathematics Access To Retain Talent Grant (National SMART Grant). The Federal National SMART Grant will provide grant assistance for third and fourth year undergraduate students who are enrolled at least half-time are eligible for a Federal Pell Grant, and majoring in physical, life, or computer sciences, mathematics, technology, or engineering or in a foreign language determined critical to national security. The student must also have maintained a cumulative grade point average (GPA) of at least 3.0 in coursework required for the major each term.

Federal Perkins Loan. This is a federal loan based on financial need for students accepted/enrolled in an undergraduate or graduate degree program. The Perkins 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. Entrance and exit interviews are required by federal law.

Federal Nursing Student Loan. This is a federal loan based on financial need for students accepted/enrolled in an undergraduate nursing program. The Nursing 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. Entrance and exit interviews are required by federal law.

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 or off-campus 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 Financial Assistance website (www.villanova.edu/enroll/finaid/studentjobs.htm).

PHEAA Grant. This is a Pennsylvania State Grant based on financial need for students who qualify for PA state residency and who are accepted/enrolled in an undergraduate program and enroll for at least six credits each semester. Eligibility is determined by the state.

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 Awards. 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, and University regulations prohibit over awards. All outside scholarships, whether based on academic merit or financial need, 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 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 Stafford 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) from their lender or State Higher Education Assistance Agency. Eligibility for a Federal Stafford 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 Federally Subsidized Stafford Loan. Students without remaining financial need will be eligible for a Federal Unsubsidized Stafford 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 Stafford 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 5.6% for the Federal Subsidized Stafford Loan and 6.8% for the Federal Unsubsidized Stafford Loan. A guaranty fee and/or an origination fee, up to 2%, may be charged on each loan. 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 Unsubsidized Stafford Loan.

Additional information regarding the application process for the Federal Stafford Loan program can be found on the Office of Financial Assistance website (www.finaid.villanova.edu).

Villanova University Financing Option. The Villanova University 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 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 PLUS Loan and an Alternative or Private Educational Loan.

Tuition Management System (TMS) Tuition Payment Plan. The TMS Tuition Payment Plan allows students to spread their balance out over ten months for a small fee. There is no interest charged on the plan and life insurance is included to cover the bill payer and provide a variety of other benefits. Tuition Management Systems (TMS) administers the program for Villanova University. Information on this program can be obtained via their website at www.afford.com or by calling them directly at 1-800-895-9061.

Federal 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 8.5%. The Federal PLUS Application and Master Promissory Note can be obtained from a lender of your choice. A Villanova University PLUS Application must also be completed if a family does not complete the FAFSA but we strongly recommend that a family complete a FAFSA in lieu of the Villanova University PLUS Application.

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. Many 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.

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.

Villanova University Academic Maximum Time Frames for Completing Degree Requirements.

- Students are expected to complete their program of study (degree) in the number of semesters indicated in the catalog. Transfer students and students changing programs are placed in an appropriate semester on the basis of credits transferred. Such students are expected to complete their degree according to the remaining semesters in their program plus one additional semester to allow for scheduling difficulties.
- The maximum time frame for completing Associate degree requirements is three years for full-time students and six years for part-time students.
- The maximum time frame for completing Baccalaureate degree requirements is six years for full time students and twelve years for part time students. Transfer

credits earned at other institutions that are applicable to the student's program of study will be considered in determining the student's maximum time frame for program completion.

- ❑ Students must make quantitative and qualitative progress toward their educational goals each academic year to receive financial aid. The academic year consists of two regular semesters and the summer sessions.

Quantitative Standards. Full time students must successfully complete a minimum of 24 credit hours each academic year. Students admitted in January must successfully complete a minimum of 12 credits during their first Spring semester.

Students enrolled on a three-quarter basis (9-11 credits per semester) must successfully complete a minimum of 18 credit hours each academic year.

Students enrolled on a half-time basis (6-8 credits per semester) must successfully complete a minimum of 12 credit hours each academic year.

Qualitative Standards. Students must maintain a Cumulative Grade Point Average (GPA) of 2.0 calculated at the end of the academic year in order to be considered a student in good standing.

Measurement of Academic Progress Requirements. Academic progress will be measured in May of each year. 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 failed to meet the qualitative and quantitative requirements for academic progress can attempt to complete additional credits and bring up their GPA during the summer sessions. Upon completion of the additional credits, a new determination of academic progress will be made.

Transfer students are evaluated for academic progress in May, after the first Spring semester attended at Villanova University. Students who transfer in for the Fall semester are evaluated on their academic performance during their first Fall and Spring semesters. Students who transfer in beginning with the Spring semester are evaluated on their performance during their first Spring semester.

All financial aid applicants are subject to the satisfactory academic standards regardless of whether or not they received financial aid previously.

Failures and withdrawals are courses attempted but not completed. Incompletes are not counted toward credits completed until after the coursework is successfully completed and posted by the Registrar. Repeat courses will not count toward credits completed for satisfactory academic progress since the credits were already counted toward the quantitative standards the first time the course was completed.

When Minimum Standards of Academic Progress Are Not Achieved. A student who does not make satisfactory academic progress will be placed on financial aid suspension until the requirements are met. The student will be notified in writing of the financial aid suspension.

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 achieving satisfactory academic progress.

The following types of mitigating circumstances may be considered when a student appeals: extended illness, death in the family, and changes in educational objective. The Office of Financial Assistance may request additional documentation and/or require a personal interview with the student. After the review, the Office of Financial Assistance will notify the student in writing of the action taken.

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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. At the end of the probationary semester, the Office of Financial Assistance will determine if academic progress requirements have been met. If requirements have been met, the probationary status will be removed. If academic requirements have not been met, the student will be placed on financial aid suspension.

Once financial aid has been discontinued, it will be reinstated provided:

- The student has successfully achieved the required number of credits and grade point average;
- The student has requested reinstatement in writing; and
- Funds are still available.

Reinstatement is not automatic. The student is responsible for making certain that the grades and credits completed have been properly posted with the Registrar prior to requesting reinstatement of financial aid. Students are encouraged to file all financial aid application forms by Villanova University's established deadline so that once reinstatement has been achieved, he or she can be considered for aid as quickly as possible.

A student who is denied aid based on qualitative or quantitative standards will be considered for aid when standards have been achieved. Under no circumstances will aid be awarded retroactively to the semester(s) in which standards were not met.

RETURN OF FEDERAL TITLE IV AID

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 Academic Competitiveness Grant (ACG), Federal National Science and Mathematics Access To Retain Talent Grant (National SMART Grant), Federal Perkins Loan, Federal Stafford Loan, or Federal 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:

- Unsubsidized Federal Stafford Loan
- Subsidized Federal Stafford Loan
- Federal Perkins Loan
- Federal PLUS /Federal Grad PLUS

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Federal Pell Grant

Federal SEOG

Federal Academic Competitiveness Grant (ACG)

Federal National Science and Mathematics Access To Retain Talent Grant (National SMART Grant)

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.

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 an INS district director;

An official statement granting asylum in the US: or

Other proof from the U.S. Immigration and Naturalization Service 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. For completed application information check the International Students website at www.villanova.edu/enroll/finaid/international.htm.

VERIFICATION

Verification is a requirement of the U.S. Department of Education and is the process of confirming information submitted on the various Federal Title IV Funds including the Federal Stafford Loan. 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.

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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.

Documents Required:

- ❑ (For dependent students): signed copies of custodial parents', stepparent's (if applicable) and student's U.S. or Puerto Rico income tax returns from the prior year, W-2 form(s) and 1099 form(s).
- ❑ (For independent students): signed copy of the student's (and spouse's if applicable) prior year 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.
- ❑ Villanova University Institutional Financial Aid Application for returning students.
- ❑ College Scholarship Services (CSS) PROFILE for prospective students. If a student is only interested in receiving federal aid a student may submit a federal verification worksheet in lieu of the PROFILE. Contact the Office of Financial Assistance for this form.

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 STANDING

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

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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. 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 record of any student whose cumulative or semester quality-point average falls below 2.00 will be reviewed by the Academic Standing Committee for appropriate action. Students in science or engineering whose technical course quality-point average falls below 2.00 will also come before the committee (technical courses include all science, mathematics and engineering courses). Typically the student will either be placed on academic probation or dismissed.

A student on academic probation will normally be allowed only one semester to achieve the required quality-point average. While on academic probation, the student is limited to a schedule of five courses and is ineligible to participate in any extracurricular activities. In the College of Liberal Arts and Sciences a student on probation is limited to a schedule of four courses.

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).

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. A copy of the procedures is also available on request from the Academic Affairs Office, 103 Tolentine Hall, (610) 519-4520.

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. Enforcement of such attendance policies lies with those instructors. Where possible, students should inform their instructors if they plan to be late or absent from class.

Excused absences for all students include the following: approved athletic participation or participation in approved academic events; official university business; approved field trips; certified serious illness; death in the immediate family; or approved placement activities. An absence card, available from the Office of the Dean of the student's college, must be completed and presented to the Dean with appropriate documentation. This should be done before the absence, if possible, but at any rate no later than 4:30 p.m. on the day the student returns to classes. Excused absences allow the student to make up tests and do not count toward a failure in the course for first year students. Absence from class does not release the student from work assigned.

The instructor is required, however, to take, record and report attendance for all classes as directed by the Registrar.

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.

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 (www.vpaa.villanova.edu), 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.

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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 VPAA'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.

I. 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.

II. 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

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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, NROTC 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.

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- (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 sex 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.

III. 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.

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IV. 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.

* 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.

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.

FINAL EXAMINATIONS AND SCHEDULING CONFLICTS

Final examinations are given in virtually all courses at a time and place designated. The schedule for examinations is available on the Registrar's home page early in the semester so that students should make their end-of-semester travel arrangements accordingly.

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 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.

GRADING SYSTEM

At mid-semester and at the end of the semester grades are available to the student. The grade report at the end of the semester is part of the student's permanent record. Any inaccuracy on this record must be reported to the Registrar within two weeks of its receipt; otherwise, the record will stand as it is.

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

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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.

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 automatically becomes 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.

RESIDENCE REQUIREMENT FOR GRADUATION

A student must complete the final 30 credit hours of an academic program at Villanova. With the permission of the College Dean, study as part of an approved International Studies program may count towards the residency requirement.

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.

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.

1. Four-year Institutions. Normally once a student has been matriculated at Villanova, no credits may be transferred from two-year institutions of higher education. However, new transfer students either from other four year institutions or from two year institutions may seek to transfer credits from two year institutions.

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

3. 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.

4. 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.

5. 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.

6. 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, approximately three and one-half weeks after mid-term break (for an exact date, see the academic calendar @ www.villanova.edu/vpaa/office/calendar.htm), 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 under "Withdrawal from a Course" in each college's section of this 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.** 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 well being 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.

- ❑ The student must schedule an appointment with the Student Health Center or the University Counseling Center for a MLOA evaluation.
- ❑ 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.
- ❑ 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

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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

Rev. Kail C. Ellis, O.S.A., Ph.D., Dean

Robert DeVos, Ph.D., Associate Dean for Enrollment and External Transfer Services

John Doody, Ph.D., Associate Dean for First-year Studies

Edwin L. Goff, Ph.D., Associate Dean for Honors Program

Lowell Gustafson, Ph.D., Associate Dean for Social Sciences

Helen K. Lafferty, Ph.D., College Professor in the Liberal Arts and Sciences

Jane Morris, Director of the Center for Undergraduate Research and Fellowships

Thomas W. Smith, Ph.D., Associate Dean for Humanities

R. Kelman Wieder, Ph.D., Associate Dean for Sciences

Robert Blanchard, B.A., Assistant Dean for External and College Relations

Kate Szumanski, M.A., M.S., Director of Communications

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E-mail Dean: **asdean@villanova.edu**

Web site: **<http://www.villanova.edu/artsci/>**

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 trained 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.

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

College of Liberal Arts and Sciences

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.

LEARNING OBJECTIVES

Goal A. 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.

Values Objective: Graduates of the College of Liberal Arts and Sciences will demonstrate their engagement in and commitment to the pursuit of knowledge in a manner conducive to life-long learning.

Knowledge Objective: Graduates of the College of Liberal Arts and Sciences will demonstrate their knowledge of: (1) the fundamental facts, concepts, responsibilities, and modes of inquiry related to their academic majors and professions; and (2) topics of personal and intellectual interest to them, pursued through their choice of elective courses and other means.

Skills Objective: Graduates of the College of Liberal Arts and Sciences will demonstrate the following skills: (1) critical analysis; (2) creative problem solving; and (3) well-developed analytical skills.

Goal B. 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.

Values Objective: Graduates of the College of Liberal Arts and Sciences will demonstrate an appreciation for literacy in all its forms, including the way in which such information is gathered and expressed for the purpose of furthering intellectual discourse.

Values Objective: Graduates of the College of Liberal Arts and Sciences will comprehend the role and importance of scientific and technological literacy.

Knowledge Objective: Graduates of the College of Liberal Arts and Sciences will demonstrate their ability to engage in intellectual discourse with well-developed oral and written communication skills.

Knowledge Objective: Graduates of the College of Liberal Arts and Sciences will demonstrate their understanding of how technical/professional writing is accomplished within their academic majors.

Skills Objective: Graduates of the College of Liberal Arts and Sciences will demonstrate their knowledge of: (1) how to acquire information that promotes the learning experience and the exchange of ideas; (2) appraise the value of such information in the current context; and (3) how to apply proper citation information for these materials.

Goal C. 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.

Values Objective: Graduates of the College of Liberal Arts and Sciences will demonstrate their appreciation of the works produced by intellectual and artistic endeavors, at a level consistent with the requirements of their academic majors and/or their participation in co-curricular cultural activities.

Values Objective: Graduates of the College of Liberal Arts and Sciences will demonstrate an attitude of concern for or interest in international and multicultural issues.

Knowledge Objective: Graduates of the College of Liberal Arts and Sciences will demonstrate their knowledge of the works produced by intellectual and artistic endeavors,

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at a level consistent with the requirements of their academic majors and/or their participation in co-curricular cultural activities.

Knowledge Objective: Graduates of the College of Liberal Arts and Sciences will demonstrate their comprehension of cultural issues, including how multicultural and international perspectives can be incorporated into their own cognitive framework.

Skills Objective: Graduates of the College of Liberal Arts and Sciences will demonstrate an understanding of other languages, including the ability to communicate (in both oral and written forms) using appropriate grammar and vocabulary in a variety of culturally-authentic and meaningful contexts.

Goal D. The educational program does not simply look to the past, but acknowledges that our world is vibrant and continuously redefined. Thus, we must 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 trained to scrutinize and bring into perspective the relationship of the present day with that of the past.

Values Objective: Graduates of the College of Liberal Arts and Sciences will demonstrate an appreciation of how our historical perspectives are related to modern-day issues.

Knowledge Objective: Graduates of the College of Liberal Arts and Sciences will demonstrate their knowledge of the intellectual, ethical, and spiritual traditions of Western civilization, including Judaeo-Christian, Catholic, and Augustinian traditions and the values and moral principles inherent in them.

Goal E. Prepare students to become active and responsible participants within society by developing an understanding of ethical responsibilities and valuing communal responsibilities.

Values Objective: Consistent with their attainment of intellectual goals, Graduates of the College of Liberal Arts and Sciences will (1) treat others with compassion, civility, and respect; (2) demonstrate their acceptance of individual, cultural, social, and ideological differences; (3) accept the responsibilities of community membership; and (4) demonstrate respect for the natural environment.

Knowledge Objective: Graduates of the College of Liberal Arts and Sciences will demonstrate their knowledge of how major Western ethical traditions (especially those influenced by Jewish and Christian perspectives) apply to selected contemporary ethical problems.

Knowledge Objective: Graduates of the College of Liberal Arts and Sciences will demonstrate their knowledge of ethical practices within their academic majors.

Skills Objective: Graduates of the College of Liberal Arts and Sciences will (1) manage conflicts productively; (2) work together to accomplish common goals and further the

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common good; and (3) motivate and coordinate the efforts of others to work toward common goals.

Goal F. 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.

Values Objective: Graduates of the College of Liberal Arts and Sciences will accept responsibility for the consequences of their own decisions and behavior.

Skills Objective: Graduates of the College of Liberal Arts and Sciences will (1) define a set of personal goals reflective of their values, capabilities, and interests; (2) demonstrate independence and self-direction in personal problem solving and goal attainment, including the ability to find and employ appropriate resources; and (3) establish rewarding relationships within their peer groups.

SPECIAL PROGRAMS

ACADEMIC SEMINARS IN WASHINGTON, D.C.

Villanova University in conjunction with the Washington Center sponsors intense two-week academic seminars in the District of Columbia in January, May, and August. Seminars do not interfere with the University calendar. Upon successful completion of the program, three elective credits are awarded the students. Program details are available in the Internship Office, 451 St. Augustine Center (610-519-4661).

CREDIT BY EXAMINATION

To encourage independent study and recognize personal knowledge and mastery of a 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 www.villanova.edu/artsci/creditbyexam. Also, you may contact the Dean’s Office, 105 St. Augustine Center for the Liberal Arts, 610-519-4600.

HEALTH AFFILIATION PROGRAM

(www.villanova.edu/artsci/healthprofessions)

Villanova University has Health Affiliation programs with a number of institutions including, the Drexel University, School of Medicine, Thomas Jefferson University College of Health Professions, the University of Pennsylvania School of Dental Medicine, The Pennsylvania College of Optometry. Applications to these programs must be received by the Office of University Admission no later than November 1. SAT I or ACT must be taken no later than October of the senior year. These programs are not available to transfer students.

HEALTH RELATED SCIENCE PRE-PROFESSIONAL ADVISING

(www.villanova.edu/artsci/healthprofessions)

The Health Related Science Adviser, John Friede, Ph.D.:

- ❑ Provides information to prospective students and their parents regarding Villanova University's programs in the sciences and how Villanova University can prepare them for careers in health related professions;
- ❑ Provides information to matriculated students on professional schools and their application processes;
- ❑ Prepares the evaluation materials for each Villanova student applying to a professional school in the health sciences; and
- ❑ Serves as the academic adviser for students accepted into the affiliation programs.

Additional information is available from the Health Science Adviser in 151 Mendel Science Center (610-519-4833) or from the Office of the Dean in the College of Liberal Arts and Sciences.

HONORS PROGRAM

Director: Edwin L. Goff, Ph.D.

Office: 103 St. Augustine Center for the Liberal Arts

Tel. (610) 519-4650

Website: www.honorsprogram.villanova.edu

Course descriptions: www.artsci.villanova.edu/courses/honors

The University Honors Program is a comprehensive four-year curriculum of small seminars designed to foster the free and open exchange of ideas among students and faculty. Honors courses emphasize extensive reading and writing, and attempt to develop the critical abilities of judgment and analysis. Innovative courses include team-taught seminars and seminars given by visiting professors. All Honors courses are enriched by a variety of lectures, cultural events, and social activities.

Students in the College of Liberal Arts and Sciences may pursue the degree of B.A. or B.S. Honors Program. The Honors Program Sequence in Liberal Studies (the Honors Program Interdisciplinary Concentration) is open to students in all colleges.

Acceptance: 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 QPA). Individual Honors courses are open to all Villanova students who have at least a 3.0 overall QPA or will bring a special expertise to the course, contingent upon class size limitations. Admission to all Honors courses requires the permission of the Director.

INTERNATIONAL STUDIES

The College of Liberal Arts and Sciences strongly encourages all majors in the College to consider studying overseas in a foreign university for a summer, a semester, or for a year during the sophomore or junior years at Villanova. Students may study subjects in their major, minor or concentrations, strengthen their modern language skills, or complete Core course requirements through Overseas Programs. In any case, students normally enhance past skills such as high school languages learned but no longer studied due to heavy course requirements at Villanova, work toward a career path through overseas internships, gain fluency in language currently being studied, or begin learning a language. Interested students should see the detailed discussion of International Studies in the Villanova University section of this catalog.

INTERNSHIPS

The College of Liberal Arts and Sciences provides its students with the opportunity to earn course credit in departmentally related and academically creditable internships. Internships for academic credit must be directly related to a student's major, minor, or concentration. Internships are not restricted to the Delaware Valley, and might take place in Washington, D.C., as well as other parts of the country. Qualified juniors and seniors with a 3.0 QPA are eligible to participate in the program. Internships last for the semester and can be either full-time or part-time. They are also available during the summer sessions. Program details are available from the Internship Director, St. Augustine Center for the Liberal Arts, Room 415 (610-519-4232).

NATIONAL FELLOWSHIP AND SCHOLARSHIP ADVISEMENT

(<http://www.villanova.edu/artsci/college/academics/curf/>)

Villanova University provides comprehensive advisement for students who pursue prestigious national scholarship and fellowship opportunities, including the Truman, Goldwater, Udall, Fulbright, Marshall, Rhodes, National Science Foundation, Hughes, Mellon, and Ford Foundation. A mentoring program is administered by the Center for Undergraduate Research and Fellowships, and begins as early as an undergraduate student's first year. In recent years, more than 135 students have received formal recognition from these various national scholarship programs. Center for Undergraduate Research and Fellowships. Ms. Jane Morris, Director, 138 St Augustine Center for the Liberal Arts, 610-519-5928.

PHI BETA KAPPA

Phi Beta Kappa is the 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. Villanova University became one of the colleges and universities to shelter a chapter when the Sigma of Pennsylvania Chapter of Phi Beta Kappa was installed at Villanova in April 1986. The Phi Beta Kappa standards reflect the highest ideals of liberal education at Villanova: education that is concerned with values as well as facts,

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and wisdom as well as knowledge; education that seeks freedom from ignorance, alienation, and inhumanity; 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 completed three semesters of work in the College of Liberal Arts and Sciences and be fully registered for a fourth.
- ❑ Candidates must have a grade point average 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.

In choosing candidates for election, the Chapter seeks 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 the membership.

ROTC NAVY (www.nrotc.villanova.edu)

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 mission of the NROTC program is to develop midshipmen morally, mentally and physically, and to imbue them with the highest ideals of duty, honor and loyalty. They must possess a basic professional background, be motivated towards a career in the Naval Service and have a potential for future development in mind and character so as to assume the highest responsibilities of command, citizenship and government. 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 minimum period of four to ten years, depending upon choice of warfare specialty.

Participation in the NROTC Unit is through either the Scholarship or College Programs. Students in the NROTC Scholarship Program (national selection competition) receive a substantial subsidy from the Navy, including tuition, books, and fees. A monthly subsistence allowance is also provided as follows: Freshman \$250, Sophomores \$300, Juniors \$350, and Seniors \$400. Midshipmen participate in three summer cruises on board various naval ships and installations and receive active duty pay while on these cruises.

NROTC College Program students (Non-Scholarship) apply directly to the Villanova NROTC Unit, usually prior to or early in the fall semester of their freshman year. Students in the College Program receive no government subsidy until their junior and senior years, during which they receive a monthly subsistence allowance of \$350 for

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Juniors and \$400 for Seniors. They participate in one summer cruise and receive active duty pay while on cruise. Scholarships are available each year to those NROTC College Program students who stand at or near the top of their College Program class in terms of overall academic performance and aptitude for commissioned service. The Professor of Naval Science nominates College Program students for these scholarships with the selection being made by the Commander, Naval Service Training Command (NSTC).

In addition to the four-year programs described above, two-year NROTC Scholarships and two- or three-year Tweeddale Scholarships are available. Both may be offered to college students who have not previously participated in an ROTC or Service Academy commissioning program. Tweeddale is a specialized scholarship designed to attract students in technical majors, engineering specialties in particular. Students must apply for these programs early in the spring semester of their sophomore year (or as early as the spring semester of their freshman year for Tweeddale Scholars). Application packages are normally due to NSTC by 31 March each year. Those selected for the two-year programs must successfully complete a six-week training course at Newport, RI, during the summer preceding their junior year. Upon enrollment in the NROTC Program at the beginning of their junior year, two-year program students have the same benefits (tuition, books, fees and stipend), and assume the same active duty obligation, as four-year program students.

All Scholarship and College Program students may select any major at the University; however, a shift in Navy Policy has placed great emphasis on students who excel academically in technical majors and some foreign languages. 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.

NOTE: Applicants for the NROTC Program are not relieved of the necessity for payment of the registration deposit required by their letter of acceptance for admission to Villanova University.

ROTC ARMY (www.widener.edu/rotc or www.armyrotc.villanova.edu)

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 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.

The Army ROTC Program involves undergraduate courses taken during the freshmen and sophomore years, and advanced courses taken during junior and senior years. Students may enroll in the introductory courses without incurring any military or financial obligation and may withdraw at any time, subject to Villanova University's course withdrawal policy. Students who participated in Junior ROTC in high school or have prior military service may receive placement into the advanced courses as determined by the Army Professor of Military Science. The introductory course requirements may also be satisfied through attendance at the 28-day Leader's Training Course (LTC) at the end of the sophomore year. Students in the advanced courses are required to attend the 33-day Leadership Development and Assessment Course (LDAC)

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between their junior and senior years. Students enrolled in the advanced courses receive a stipend of \$350 to \$400 per month and may incur an active duty obligation of up to three to four years. National Guard and Reserve Forces options are also available.

Nursing students who complete the four-year or two-year program, obtain their Nursing Degree, and pass the Nursing Board Examinations are commissioned into the Army Nurse Corps.

Four-year, three-year, and two-year Army ROTC scholarships are available on a competitive basis. Scholarships pay up to \$20,000 per year for tuition, \$900 annually for books, and a tiered \$250-400 per month stipend. Additionally, up to five four-year scholarship winners receive full tuition payments through an agreement with Villanova University.

Applications for the three-year Army ROTC scholarships should be submitted early in the spring semester of the freshman year; applications for the two-year Army ROTC scholarships should be submitted early in the sophomore year. Applications for attendance to the LTC must be submitted early in the spring semester of the sophomore year.

Detailed information may be obtained from the Scholarship and Enrollment Officer, Widener University, Chester, PA 19013, (610) 490-7035 / 4098 or by the Villanova Campus Army ROTC representative at 610-519-5953.

ROTC AIR FORCE (www.sju.edu/academics/cas/afrotc/)

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 are 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.

The program of Aerospace Studies offers a one to four year curricula leading to a commission as a Second Lieutenant in the Air Force. Students are under no contractual obligation to the Air Force until they accept an Air Force scholarship as sophomores or higher or enter the Professional Officer Corps.

Air Force ROTC offers 1, 2, 3 and 4 year scholarships on a competitive basis to qualified applicants. Four-year scholarships are available to high school seniors in various fields. The scholarships are offered to cadets enrolled in the AFROTC program and to college entrants to AFROTC. All scholarships cover tuition, lab fees, reimbursement for books, plus a \$250-\$400 tax-free monthly stipend, depending on academic year.

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

TEACHER CERTIFICATION ELEMENTARY EDUCATION

Chair: John Durnin, Ph.D.

Office: 302 St. Augustine Center for the Liberal Arts; Tel. (610) 519-4620

Web site: <http://www.villanova.edu/artsci/education/undergrad/elementaryed.htm>

Villanova, in cooperation with neighboring Rosemont College, offers students a program leading to a Pennsylvania-approved program in elementary education certification. Students planning to teach are admitted to the teacher certification program in the sophomore year after interviews and scholastic averages indicate they have the acceptable qualifications. A Villanova student may be recommended for certification in elementary education by Rosemont College by satisfactorily completing (1) all major and core requirements of Villanova University, (2) the professional education requirements of Rosemont College, and (3) the necessary psychology and education courses at Villanova.

Interested students must make application to the Chair of the Department of Education and Human Services, 302 St Augustine Center in the fall semester of their sophomore year and must have achieved a cumulative grade point average of 3.00. An interview with the Director of the Education Program at Rosemont College is required. A limited number of students may be accommodated in this program. Students should arrange their own transportation.

Students in the Elementary Education Program are required to complete professional courses and student teaching during the first semester of the senior year. To be eligible for the student teaching experience, students must fulfill the following requirements:

- A cumulative grade point average 3.00 with a minimum grade of B- in each required professional course.
- A cumulative grade point average of 3.00 in the student's major and a recommendation from the Villanova department chairperson.
- Doctor's certification of physical and mental health.

See the Web site above for more information.

TEACHER CERTIFICATION SECONDARY EDUCATION PROGRAM

Chair: John Durnin, Ph.D.

Office: 302 St. Augustine Center for the Liberal Arts; Tel. (610) 519-4620

Web site: <http://www.villanova.edu/artsci/education/teachercert/>

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 Human Services may be admitted to the teacher education program upon

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the approval of the Undergraduate Committee. Students admitted to the teacher education program must complete the same requirements as Education majors, including student teaching. Student Teaching is normally taken in the second semester of the senior year. Undeclared Arts students who may be interested in Secondary Teacher Certification should stop by the Office of Education and Human Services, 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 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. Upon successful completion of the major and the National Teachers Examination (NTE/Praxis) in communication skills, general knowledge, professional knowledge, and subject specialization, the student will be eligible for certification.

THE BACCALAUREATE DEGREE

GENERAL 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:

- ❑ A minimum of 40 courses of three or more credits and two labs (science degrees vary according to major), which include the successful completion of the Core Curriculum, academic major requirements, and free electives;
- ❑ A cumulative GPA of at least 2.000. (Science students must also have a minimum technical grade point average of at least 2.000);
- ❑ At least half of the Core Curriculum requirements must be fulfilled at Villanova University;
- ❑ At least half of the requirements for the major must be fulfilled at Villanova University;
- ❑ The final 30 credits of the degree program must be earned at Villanova University;
- ❑ A minimum of 122 credit hours; and
- ❑ At least 61 credits must be earned at Villanova University.

DEGREE PROGRAMS

Bachelor of Arts with majors in:

Art History Humanities

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Classical Studies** Human Services
Communication** Italian
Criminal Justice ** Philosophy
Economics Physics
Education (Secondary) Political Science**
English Psychology**
Environmental Studies Sociology
French and Francophone Studies Spanish**
Geography Theology and Religious Studies**
Global Interdisciplinary Studies
History

Bachelor of Arts, Honors

Bachelor of Science with majors in

Astronomy and Astrophysics Computer Science**
Biology** Environmental Science
Biochemistry Comprehensive Science
Chemistry** Mathematics**
Physics

Bachelor of Science, Honors

** Indicates the opportunity for integrated Bachelor's/Master's program

INTERDISCIPLINARY CONCENTRATIONS

In addition, interdisciplinary concentrations are available in:
Africana Studies Irish Studies
Arab and Islamic Studies Latin American Studies
Augustine in Dialogue with Faith and Culture Peace and Justice
Cognitive Science Russian Area Studies
East Asia Studies Writing and Rhetoric
Ethics
Elementary Education (in conjunction with Rosemont College)
Gender and Women's Studies
Honors (Arts)

MINORS

In addition to most of the above, minors are also available in
Aerospace Studies (Air Force ROTC) Military Science (Army ROTC)
Arabic Naval Science (Navy ROTC)
Business Russian
Chinese Theater
Criminal Justice

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Japanese

See the Majors, Interdisciplinary Concentrations, and Minors Section for detailed information on requirements for each of these degrees, interdisciplinary concentrations, and minors.

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.

THE CORE CURRICULUM

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 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. Fact learning alone is not enough to justify the existence of a Core Curriculum; rather the purpose of the core is to achieve a synthesis of knowledge that provides a basis for informed judgment. The Core also seeks to promote literacy as a foundation for intelligent discourse and the articulation of informed views.

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 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) Augustine and Culture Seminar (ACS)..... 2 courses
- 2) College Ethics1 course
- 3) Fine Arts.....1 course
- 4) Foreign Language..... 2 courses
- 5) History..... 2 courses

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- 6) Literature..... 2 courses
- 7) Mathematics 1 course
Mathematics/Computing Science..... 1 course
- 8) Philosophy..... 2 courses
- 9) Theology and Religious Studies..... 2 courses
- 10) Social Sciences..... 3 courses
- 11) Natural Sciences..... 2 courses w/labs

Distribution Requirements

The core courses listed above, courses required by the Major, and available electives must have attributes that include the following: five writing intensive courses, three writing enriched courses, and two diversity courses.

For more detailed information concerning Core Curriculum requirements, see the Undergraduate Handbook, Enchiridion, at:

<http://www.villanova.edu/artsci/handbook/index.htm>

ADVANCED PLACEMENT AND INTERNATIONAL BACCALAUREATE CREDIT

Students should request that the College Board send AP scores to Villanova University (our code is 2959). AP scores are received in the Registrar's Office and forwarded to our Dean's Office, where the determination on credit is made. Most AP scores for incoming freshmen reach Villanova by mid-July. If the scores are received before freshmen classes begin, a representative of the Dean's Office will communicate with the student, then authorize the Registrar's Office to post the appropriate credit to the academic record. For scores received after classes begin, this representative will simply direct the Registrar to add any credit they approve. AP credits appear in the "Transfer Credit" area of the student record.

Incoming students who have taken Advanced Placement (AP) or International Baccalaureate Higher Level (IB) exams should inform their Academic Advisor and should report to the Dean's Office during the first week of classes to verify Villanova's receipt of the official scores and to ensure that proper adjustments have been made to their academic record. In some instances scores are sent to the Villanova Registrar after courses have been assigned based on the student's response to the Incoming Students Questionnaire.

The guidelines for granting credit for courses that are equivalent are shown on the following page. Please consult the Dean's Office for guidelines regarding equivalency for International Baccalaureate courses. The following is the list of tests and scores and their application to the baccalaureate degree.

The first table is a list of AP tests; the second is a list of Higher Level IB tests and scores.

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ADVANCED PLACEMENT 2008-2009 <i>Subject-Test Number</i>	SCORE OF 3		SCORE 4 OR 5	
	COURSES	CR.	COURSES	CR.
AMERICAN HISTORY –(07)			HIS 2000 HIS 2001	3 3
STUDIO ART – (14)	PLACEMENT ONLY		PLACEMENT ONLY	
STUDIO ART – (15)	PLACEMENT ONLY		PLACEMENT ONLY	
BIOLOGY – (20)			BIO 2105 BIO 2106	4 4
CALCULUS AB – (66)			MAT 1500 MAT 1505	4 4
CALCULUS BC – (68)			MAT 1500 MAT 1505	4 4
CALCULUS SUBGRADE- (69)			MAT 1500 MAT 1505	4 4
CHEMISTRY – (25)			CHM 1103 CHM 1104 CHM 1151 CHM 1152	1 1 4 4
CHINESE LANGUAGE AND CULTURE – (28)			CHI 1111 CHI 1112	6 6
CLASSICS: VIRGIL – (60)			LAT 1121	3
CLASSICS: HORACE CATULLUS – (61)			LAT 1122	3
COMPUTER SCIENCE A – (31)			CSC 1051	4
COMPUTER SCIENCE AB – (33)			CSC 1051	4
ECONOMICS: MICRO – (34)			ECO 1001	3
ECONOMICS: MACRO – (35)			ECO 1002	3
ENGLISH LANGUAGE AND COMPOSITION – (36)	PLACEMENT ONLY		ENG 1050	3
ENGLISH LITERATURE & COMPOSITION – (37)	PLACEMENT ONLY		ENG 1050	3
EUROPEAN HISTORY – (43)			HIS 3095 HIS 3995	3 3
HISTORY OF ART – (13)			AAH 1101 AAH 1102	3 3
MODERN LANGUAGE FRENCH – (48) OR (51)	PLACEMENT ONLY		FRE 1121 FRE 1122	3 3
HUMAN GEOGRAPHY – (53)			GEO 1001	3
MODERN LANGUAGE GERMAN – (55)	PLACEMENT ONLY		GER 1121 GER 1122	3 3
MODERN LANGUAGE ITALIAN– (62)	PLACEMENT ONLY		ITA 1121 ITA 1122	3 3
JAPANESE LANGUAGE AND CULTURE -- (64)			JPN 1111 JPN 1112	6 6
MODERN LANGUAGE SPANISH – (87) OR (89)	PLACEMENT ONLY		SPA 1121 SPA 1122	3 3
PHYSICS C: MECHANICS – (80)			PHY 1100 PHY 1101	3 1
PHYSICS C: ELECTROMAG – (82)			PHY 1102 PHY 1103	3 1
POLITICAL SCIENCE – (57)			PSC 1100	3
POLITICAL SCIENCE – (58)			PSC-1875	3
PSYCHOLOGY – (85)			PSY 1000	3
STATISTICS – (90)			MAT 1230	3
WORLD HISTORY – (93)	PLACEMENT ONLY		HIS 1040 HIS 1050	3 3

**INTERNATIONAL BACCALAUREATE CREDIT
AND COURSE EQUIVALENCE
NOTE: CREDIT IS ONLY GIVEN FOR HIGHER LEVEL EXAMS**

SUBJECT	SCORE OF 5	CR	SCORE OF 6 OR 7	CR
ANTHROPOLOGY			SOC 2100, SOC 4000	6
BIOLOGY			BIO 2105, BIO 2106	8
CHEMISTRY			CHM 1151, CHM 1152	8 OR 10*
COMPUTER SCIENCE HL	CSC 10510	4	CSC 1051	4
INFORMATION TECHNOLOGY	CSC 1030	3	CSC 1030	3
ECONOMICS	ECO 1001, ECO 1002	6	ECO 1001, ECO 1002	6
ENGLISH	ENG 1010, ENG 1050	3	ENG 1010 OR ENG 1050	3
FRENCH A	PLACEMENT	0	FRE 1121, FRE 1122	6
GEOGRAPHY	GEO 1001	3	GEO 1001	3
GERMAN A	PLACEMENT	0	GER 1121, GER 1122	6
HISTORY AMERICAS		0	HIS 2000, HIS 2001	6
HISTORY EUROPE		0	HIS 3095, HIS 3995	6
LATIN	PLACEMENT	0	LAT 2031, LAT 2032	6
MATHEMATICS			MAT 1500	4
MATH FURTHER	MAT 1500	4	MAT 1500, MAT 1505	8
MUSIC			SAR 3000	3
PHILOSOPHY	PLACEMENT	0	PHI 1050, PHI 2950	6
PHYSICS			PHY 2410/11, PHY 2412/13	8
PSYCHOLOGY			PSY 1000	3
SPANISH A	PLACEMENT		SPA 1121, SPA 1122	6

- Sample of lab work needed for approval of lab courses CHM 1103 and CHM 1104

FOREIGN LANGUAGE PLACEMENT

- All students who decide to continue their study of French, German, Italian, or Spanish from high school in order to fulfill the Core Curriculum requirement of two courses at or above the intermediate-level are required to complete the online

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language placement examination for the language in which they will enroll by June 15.

- ❑ The online language placement examination consists of questions on vocabulary, grammar, and reading comprehension and generally takes about 25 minutes to complete. Based on the results of the test and a number of other factors (such as the number of years of study of the language in high school, study or time abroad, etc.), the student will be placed at the appropriate level by professors of the language of choice and automatically registered for the appropriate course. For important additional information on the online placement exam and to take the online examination, please visit: <http://www.villanova.edu/artsci/modernlanglit/about/languagerequirements/placementtest>
- ❑ Please note that if you have never studied French, German, Italian, or Spanish and wish to do so to meet the Core Curriculum language requirement, you must register for the first semester introductory course of the language, Introductory I, numbered 1111. You do not have to take the online placement examination, but remember that in this case, you must successfully complete four semesters of that language.
- ❑ As an alternative to meet the language requirement, students may choose the two-semester introductory sequence in either Arabic, Chinese, Classical Greek, Japanese, or Russian.

MATHEMATICS PLACEMENT

The Core Curriculum requirement for all students in the College of Liberal Arts and Sciences is two courses. For Science students, it is two Math courses. For Arts students, one course has to be Math and the second course can be either Math or Computer Science. All incoming students to the College of Liberal Arts and Science take a Math or Computer Science course in the first semester. A student's potential choice of major and career plan affects his or her choice of Mathematics.

1. Health Professions, one of the following sequences:
 - Preferred: MAT 1310 and 1315, Calculus for Life Science Applications
 - MAT 1320 and 1325, Calculus for Liberal Arts
 - MAT 1500 and 1505, Calculus
2. The Sciences
 - Biology- MAT 1310 and 1315
 - Chemistry, Computer Science, Comprehensive Science Mathematics, Physics - MAT 1500 and 1505
3. Naval Science, one of the following sequences:
 - MAT 1500 and 1505, Calculus
 - MAT 1320 and 1325, Calculus for Liberal Arts

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- MAT 1310 and 1315, Calculus for Life Science Applications

4. Interdisciplinary Concentrations

- Environmental Studies- MAT 1230, Introductory Statistics and one course in Calculus

5. Business Minor

- MAT 1230 and 1235, Introductory Statistics I and II

6. Arts Students

- Two Math courses. They do not have to be in the same sequence. A student could choose an introductory calculus course and an introductory statistics course; or
- A Math course and a computer science course.

TRANSFER CREDIT

Students who have taken college courses at another institution prior to attending Villanova, must present the necessary course descriptions and other documentation as needed to the Dean's Office before or during their first semester at Villanova. Credit for courses taken at two-year institutions (community colleges) will be considered for transfer only if the courses were taken prior to matriculation at Villanova. However, once a student has been matriculated at Villanova, no credits may be transferred from two-year institutions. Transfer credit will not be awarded for college level courses that are used to meet high school graduation requirements.

Courses will be given consideration for transfer credit only upon receipt of a seal-bearing, official transcript sent by mail to the College, and, upon request, an official course description (e.g., from a course catalog). If such courses are not presented for evaluation during the first year, no future possibility for evaluation or credit will exist. Transfer credit will be awarded only for approved courses in which a student earns a grade of "C" or better. The actual grade received at the other institution (earned either before attending Villanova or earned during a summer) is not calculated into the student's cumulative grade point average.

Transfer credits (along with AP credit) may be used for no more than half the courses required for the degree, no more than half the courses for the major, minor or concentration and no more than half the courses required for the core curriculum. Transfer students must have completed three academic semesters at Villanova before being eligible to study abroad during the academic year. No more than four Web or distance learning courses may be applied to a student's degree. With the official transcript the transferring student must identify such courses that appear on their transcript.

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

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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 the student to assess course outcomes.

ACADEMIC ADVISING

ACADEMIC ADVISING OFFICE

451 St. Augustine Center for the Liberal Arts
Nancy Allen, Ph.D., Director
Lynda Capuzzi, Associate Director
Trudi Tedjeske, Assistant Director
Kathleen M. Moore, Advising Coordinator
Joyce Harden Administrative Assistant

www.villanova.edu/arts/college/advising
as.advising@villanova.edu
610-519-4661 or 610-519-8900

The Academic Advising Office in the College of Liberal Arts and Sciences reinforces the College's mission by emphasizing the holistic education of each student. The academic advisor balances support for students learning to navigate a new intellectual and social environment and the challenge to students to be active learners who synthesize knowledge and understanding from curriculum and co-curricular activities. Faculty advisors and students create a learning community where learning-centered, active learning is fostered. Academic Advising is a dynamic process through which students and faculty work together to develop a program of study that addresses each student's academic and professional goals.

Each student in the College of Liberal Arts and Sciences is assigned an academic advisor during the summer before the First-Year. The faculty advisor calls each student to welcome him or her to Villanova and answer any questions. In Orientation, faculty advisors begin a conversation with students about the value of a Liberal Arts and Sciences education, asking questions that will lead students to explore academic majors as well as possible professional or career interests.

Faculty advisors create appropriate boundaries with student advisees, knowing when a student needs to be referred to other University personnel. At the same time, faculty advisors have an understanding of the developmental as well as the intellectual needs of students and are open to discussion about how personal development affects professional development.

Faculty advisors are generalists, understanding the curriculum of all academic departments and the importance of extra-curricular activities including service learning, internships, and study abroad. Faculty advisors for students admitted as Undeclared Arts and Undeclared Science students come from all academic disciplines and include faculty

who teach our interdisciplinary Augustine and Culture Seminars. Faculty advisors for students admitted to science majors have an advisor from the academic department.

While faculty advisors will refer students to the Learning Support Services Office, The Writing Center, The Math Learning Resource Center, and to academic departments for needed tutoring, The Academic Advising Office offers workshops throughout the academic year on time management, study skills, and other topics important for academic success. Students on academic probation or with low grade point averages at the end of a semester may be required to attend academic support workshops and to meet with the faculty advisor on a more frequent basis until the deficiency is corrected.

The Academic Advising Office staff works with faculty advisors to assist students in creating linkages between academic goals and career or professional goals. To this end, we invite alumni to campus to share how their Villanova experience shaped their personal and professional development. Workshops are also offered on topics such as Professional Opportunities, Devising a Professional Development Plan, and Professional Writing.

Undeclared science students are required to declare the major at the end of the First-Year; undeclared Liberal Arts students are required to declare the major during the second semester of the sophomore year. At the time that the student declares the academic major, a new faculty advisor is assigned who provides direction for students in the chosen discipline.

Many students in the College of Liberal Arts and Sciences decide to attend graduate school. Faculty advisors in each academic department provide direction, advice, and resources for students who want to apply to graduate school. The College also provides the following resources to assist students: National Fellowship Advisement; Health Professions Advisor; and Law School Advisor.

NATIONAL FELLOWSHIP ADVISEMENT

Center for Undergraduate Research and Fellowships
Ms. Jane Morris, Director
138 St Augustine Center for the Liberal Arts
610-519-5928
<http://www.villanova.edu/artsci/college/academics/curf/>

Villanova University provides comprehensive advisement for students who pursue prestigious national scholarship and fellowship opportunities, including the Truman, Goldwater, Udall, Fulbright, Marshall, Rhodes scholarships, and fellowships awarded by the National Science Foundation, Hughes, Mellon, and Ford foundations. A mentoring program is administered by the Office of Undergraduate Grants and Awards and begins as early as an undergraduate student's first year. In recent years, more than 135 students have received formal recognition from these various national scholarship programs.

LAW SCHOOL ADVISOR

Karen M. Graziano, J.D.
402 St. Augustine Center for the Liberal Arts
610-519-7427

College of Liberal Arts and Sciences

www.villanova.edu/artsci/college/advising/development/law

There are no suggested majors or a pre-defined list of courses recommended by law schools, the Pre-Law Advisors Council, or by the Association of American Law Schools for students interested in a legal career. The Law School Admissions Council (LSAC) states, “Law schools want students who can think critically and write well, and who have some understanding of the forces that have shaped the human experience. These attributes can be acquired in any number of college courses, whether in the arts and humanities, the social sciences, or the natural sciences.” Students considering a legal career should choose a major that is of interest to them—one that is interesting, exciting, and challenging. This way, students will do their best work, learn, develop their critical-thinking and writing abilities, and achieve good grades. Professor Graziano is available to consult with students concerning the law school admission process.

INTERNSHIPS

Mr. Robert I. Blanchard, Assistant Dean
415 St. Augustine Center for the Liberal Arts
610-519-4232
<http://www.villanova.edu/artsci/internships/>

The College of Liberal Arts and Sciences encourages and supports students to seek a variety of work and experiential learning experiences that will help with their career choices and position them as superior candidates as they enter the interview process for post-graduation employment.

To support and encourage students to seek such experiences, the College provides its students with the opportunity to earn course credit in departmentally related and academically creditable internships. While all work and experiential learning experiences are valuable, students must meet academic requirements and go through the application process for approval.

Students must apply through the Internship Office for consideration to enter the program and meet certain requirements. Among these requirements are the completion of the sophomore year (or have sufficient credits for junior status) and an overall GPA of 3.0 (2.7 for the summer). Internships for academic credit must be directly related to a student’s major, minor, or concentration and meet the criteria set by the faculty of the department or program that will award the academic credit. Students interested in completing an internship for academic credit outside their area of study may apply for the Liberal Arts Internship after consultation with the Internship Office.

Complete details, including other requirements of the program, are available through the Internship Office. Students are encouraged to contact the Office early in their exploration of an internship opportunity. **No academic credit will be awarded for an internship that has not received prior approval from the Internship Office.**

FIELD STUDY OPPORTUNITIES

There are many opportunities for Villanova students to participate in summer field study in the areas of anthropology, archaeology, astronomy, biology, ecology, and marine science. Academic departments should be contacted for information on these programs.

ACADEMIC POLICIES AND PROCEDURES

It is the responsibility of students to know and to comply with the academic regulations of the University and their respective colleges. University Academic policies can be found in the Villanova University Catalog, Undergraduate Studies, located at <http://catalog.villanova.edu/>. More detailed information concerning the College's policies see the Undergraduate Handbook, Enchiridion on the College's website: www.villanova.edu/artsci/college/publications.

The Registrar's Office (Tolentine Hall 202, 610-519-4030) is responsible for registration processes; course and student records, transcripts, and enrollment reports; and other similar documents. Any changes in a student's personal data such as permanent or local address, phone numbers, etc., should be reported to this office.

ACADEMIC STANDING, PROBATION, AND DISMISSAL FROM THE COLLEGE

The College Academic Standing Committees meet at the end of each regular semester to review the academic records of any student in the College who is on academic probation or experiencing academic difficulties. The Committees recommend corrective actions to the Dean that range from Letters of Concern, to Probation, to a Dismissal from the College. Each student deserving corrective action will receive a letter from the Dean's Office stating the action taken.

The record of any student whose cumulative or semester quality-point average falls below 2.00 is automatically placed on academic probation and his or her status will be reviewed by the Academic Standing Committee for appropriate action. Students in the Arts whose major requires a minimum GPA for all courses used to meet the requirements of the major and whose major GPA fails to meet the requirement, and students in Science whose technical course GPA (technical courses include all science, mathematics, and engineering courses) falls below 2.00 will also come before the committee. Typically, the student will either be placed on academic probation or be dismissed.

A student on academic probation will normally be allowed only one semester to achieve the required grade-point average. While on academic probation, a student's course load may be limited to four courses plus any associated laboratories, and the student on academic probation may not participate in any extra-curricular activities.

The Academic Standing Committee may dismiss a student whose GPA falls below 2.00, who is not making sufficient progress toward a degree due to excessive course drops or withdrawals even if the grade-point average is above 2.00, who has not declared a major by the end of the sophomore year without permission of the Dean. There is no requirement that a student must receive a Letter of Concern or have been placed on

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Probation prior to being dismissed. A Dismissal from the College may be appealed in writing. University policy does not permit students who have been dismissed by the University to attend summer sessions at Villanova.

Matriculated students who fail to register for or attend classes in any given semester will be considered to have unofficially withdrawn from the College. To be considered for readmission, the student must submit the request in writing to the Dean.

Students who have been dismissed or who have withdrawn frequently continue their academic work and take courses at another institution. Villanova does not pre-approve such courses. If these students apply for readmission, courses taken at other institutions will be evaluated for transfer credit by the Dean of the college to which the student is seeking readmission. Such students seeking readmission to the College of Liberal Arts and Sciences will not be able to seek transfer credit for courses taken at two year (community college) institutions.

ACADEMIC PROGRESS AND CLASS STATUS

Officially, class status is determined by the number of credits earned as follows:

Arts

Freshman 0-29 credits

Sophomore 24-59 credits

Junior 58-89 credits

Senior 90+ credits

Science

Freshman 0-32 credits

Sophomore 33-65 credits

Junior 66-95 credits

Senior 96+ credits

COURSE LOAD: OVERLOADS AND UNDERLOADS

All students in the College of Liberal Arts and Sciences pursuing the Bachelor of Science Degree and the Bachelor of Arts Degree are required to be a full-time student by taking a minimum of 12 credit hours (four courses of three credits or more) each semester. Students who wish to take less than 12 credits a semester must seek approval from their academic advisor and the Dean.

The normal course load each semester for full-time students is five courses of three credits or more excluding labs. The credit limit set by the Registrar during the pre-registration period is 15-credit hours for arts students and a higher number 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 NOVASIS using their semester PIN. No paperwork is required.

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Students with a GPA lower than 3.0 taking Japanese, Chinese, Arabic, or Russian to fulfill their language requirement or in Military Science, Naval Science, Aerospace Studies or Education may have to enroll for more than 17 credits in a given semester and therefore need to have their credit limit raised prior to registering online. In these cases, students must complete and submit the Overload Request Form available in the Dean's Office prior to their assigned registration day and time. Students who enroll in an extra course without proper permission will be dropped from the course.

In no case will permission be given for a seventh course, or for six courses and associated labs totaling more than 21 credit hours.

CLOSED SECTIONS

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.

DEAN'S LIST

At the end of the fall semester and at the end of the spring semester the College of Liberal Arts and Sciences officially recognizes its best students by including their names on the Dean's List. Inclusion on the list is a tribute to a student's hard work and superior academic performance. In an effort to retain the honor which is integral to membership on the list, the requirements for inclusion are justifiably rigorous.

In order to be named to the Dean's List, a full-time student in the College of Liberal Arts and Sciences must maintain a minimum semester GPA of 3.50. All students included on the list receive a congratulatory letter from the Dean following the conclusion of the fall and spring semesters. *For the fall semester, letters are posted by the second Friday in February. For the spring semester, letters are posted the second Friday in July. These dates allow for grades of Incomplete to be changed upon the submission of outstanding work.*

DROPPING/ADDING COURSES (COURSE ADJUSTMENT)

During the *first week* of each semester, students are given the option of dropping or adding courses by using their pin number and going online through Novasis, or by completion of a paper form available in the Dean's Office and in the Advising Center. The drops do not appear on a student's transcript.

After this period, students may withdraw from courses (WX with approval during WX period, W after WX period) but may not add a course. These courses will appear on the student's transcript.

AUTHORIZED COURSE WITHDRAWAL (WX) AFTER CLOSE OF DROP/ADD PERIOD

Students are allowed to withdraw from a course after the close of the first week drop/add period without academic penalty, until a date published each year by the Registrar that is usually two days after the close of pre registration for the forthcoming semester and receive the grade of “WX”. The grade of WX does not affect a student’s grade point average but does appear on the transcript. Forms to request an Authorized Course Withdrawal are available in the Dean’s Office, 105 St. Augustine Center for the Liberal Arts, and in the Advising and Professional Development center, 451 St. Augustine Center for the Liberal Arts.

After this period, students may request an authorized withdrawal from any course, up to the commencement of final examinations, by providing to the Dean a written statement of justifiable cause for withdrawal, as well as the written recommendation of the instructor and the student’s chairperson. Withdrawal from the course will be contingent upon the Dean’s approval. Justifiable cause is a reason outside of a student’s control such as illness, which is extrinsic to the nature or difficulty of a course and which would prevent a student from completing the substantial requirements of the course.

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”. The grade of “W” is equivalent of an “F” grade and is included in computing the student’s quality point average and will appear on the student’s transcript.

GRADUATION CEREMONY

At the close of the academic year in May, the College of Liberal Arts and Sciences participates in the annual University Graduation Ceremony and hosts a special recognition ceremony and reception for all of its graduates and their families. Following University Graduation, diplomas are distributed at a location listed in the annual Graduation Program.

Students who have *no more than three courses* remaining in order to complete their degree may apply at the Office of the Dean, 105 St Augustine, for permission to “walk” in graduation. Their name will not appear in the Graduation program, and they will be handed an empty diploma case at the College’s recognition ceremony in order for pictures to be taken. Once the final courses have been completed and a grade entered, the Office of the Registrar will mail the diploma to the student at the address of record.

GRADUATION HONORS

Graduation honors will be noted on the degrees of graduating students meeting the following requirements:

- 1) Summa cum laude..... minimum cumulative GPA of 3.90
- 2) Magna cum laude..... minimum cumulative GPA of 3.75
- 3) Cum laude..... minimum cumulative GPA of 3.50

GRADUATION 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.

EVENING, ONE NIGHT A WEEK COURSES

No students may enroll in introductory survey courses (i.e. 1040, 1050, 1051) that meet one night a week.

Students whom have *completed* 45 credit hours may request permission to register for advanced courses that meet one night a week in the evening by completing the Permission To Enroll In Restricted Evening Courses Form before their enrollment day and time assigned by the Registrar each semester. The form is available in the Dean's Office, 105 St Augustine.

FAST FORWARD OR ACCELERATED 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.

ONLINE AND DISTANCE LEARNING COURSES

The availability to enroll in DL courses for current Liberal Arts and Sciences undergraduate students is limited to sophomores, juniors, and seniors with a GPA of 2.75 and above. Students studying abroad may not take Distance Learning courses in addition to their approved curriculum.

The College will *accept up to a maximum of four courses*, commonly referred to as distance learning or online courses, taken at Villanova or at another accredited college or university toward a degree program within the college. Students may not take an online course at another institution if the same course is offered on line by Villanova. The College reserves the right to test the student in order to assess the outcome of that course. The prior approval form to allow students to take DL courses is available in the Dean's Office, 105 St. Augustine Center for the Liberal Arts.

SUMMER SCHOOL AT OTHER INSTITUTIONS

Students in the College of Liberal Arts and Sciences may be permitted to take summer school courses at institutions other than Villanova University with prior approval *if the course is not offered as a Distance Learning (DL) course by Villanova*. A student may take at most the equivalent of three courses of three credits or more in the summer. Transfer credit will be awarded on the Villanova transcript only for pre approved courses in which a student earns a grade of "C" or better. The actual grade received at the other institution does not transfer and is not calculated into the student's cumulative grade point average. No credit will be awarded for courses at other institutions that has not received prior approval.

Students seeking prior approval must complete the form, Request To Enroll in Summer Courses At Another Institution, available in the Dean's Office and attach a copy of the course description(s) usually available on the institution's Web site. The form and descriptions must be submitted to the Dean's Office for approval *no later than May 15th*.

In all cases, permission to enroll in summer courses at other institutions must be obtained from the student's advisor and from the Dean's Office before enrolling in the course(s). If the summer courses are to be taken abroad, then permission also is required by the International Studies Office.

Courses generally will be approved if they are taken at accredited four-year colleges or universities and if they are equivalent to course offerings at Villanova. Credit for courses taken at two-year institutions (community colleges) is considered for transfer only if the courses were taken prior to matriculation at Villanova. Transfer students to Villanova are required to have completed three semesters on campus before leaving for overseas studies.

Upon completion of the course, it is the student's responsibility to see that an official, sealed transcript is sent to the College of Liberal Arts and Sciences at Villanova. Transfer credits may be used for no more than half the courses required for the degree, no more than half the courses for the major, and no more that half the courses required for the core curriculum.

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 a course description.

STUDY ABROAD

In order to qualify for study abroad, a student must have a 2.75 or better GPA, good health, and receive prior approval. Transfer students to Villanova are required to have completed three semesters on campus before leaving for overseas studies. The Prior Approval Form, available in the International Studies Office, requires the approval of the

various department chairs for courses in their subject area that the student wishes to take abroad and transfer, of the appropriate Foreign Language Coordinators for foreign language courses, of the departmental chairperson of the student's major, of the Director of International Studies, and the Office of the Dean.

No student will receive study abroad transfer credit for any course that has not received prior approval. Students on Leave of Absence, Suspension, or Unofficial Withdrawal will not receive study abroad transfer credit. Students studying abroad may not take Distance Learning courses in addition to their approved curriculum.

Students wishing further information should contact the Director of International Studies in Middleton Hall, Second Floor (610-519-6412).

TRANSFER STUDENTS: INTERNAL FROM ENGINEERING, NURSING, VSB, PART-TIME STUDIES

Admission to the College is competitive and is based on seats available. The number of internal transfer students to be accepted for any given semester is determined by the projection of places available in introductory sections of Humanities courses for the upcoming semester.

Students seeking to transfer from other VU colleges and schools must do so by completing the form, Application to Enter the College of Liberal Arts and Sciences. Along with the form the student must submit an academic plan that indicates a direction for future studies with reference to specific academic programs offered by the College of Liberal Arts and Sciences, and the foreign language to be taken. The applicant also must read and sign the A&S Internal Transfer Policy sheet. In addition, the student must address why he/she is transferring from their current college and program, and indicate if he/she is also applying to another VU college. The application form and Transfer Policy Sheet are available on-line and in the Dean's Office, 105 St. Augustine Center for the Liberal Arts.

The deadline for application for internal transfer to the College of Liberal Arts and Science is the second Friday in May for the subsequent fall semester; and the second Friday in December for the upcoming spring semester. Applicants will be notified of the decision either prior to or within one week after the application deadline. Primary notification will be by the student's Villanova email account.

The primary criteria for evaluation are academic performance while at Villanova. The minimum criteria for application to the College of Liberal Arts and Sciences for students who have completed only one or two semesters at Villanova is a high school profile that includes a minimum SAT score of 1235 and class standing in the top 15 percent; or a grade point average of 2.33 for all Arts courses taken at Villanova.

For all students who have completed three semesters or more at Villanova, the minimum required for application is a grade point average of 2.33 for all Arts courses taken and an academic plan that includes a direction for future studies with reference to specific academic programs offered by the College of Liberal Arts and Sciences.

Once a student has successfully completed two consecutive semesters in the College of Liberal Arts and Sciences and has attained a GPA greater than or equal to 2.50 in each

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semester, grades for the courses that do not ordinarily apply to the student’s new Arts and Sciences curriculum may be excluded from the calculation of the student’s GPA. The exclusion is not automatic. Students must petition the Dean’s Office for the exclusion.

SAMPLE CURRICULUM FOR AN ARTS MAJOR PROGRAM

The following chart offers a sample program for students with majors in Liberal Arts. It is just one of the many possible arrangements students may choose in pursuing a degree. Students are required to meet with an assigned adviser at least once each semester in order to select courses for registration. While a student may decide to alter the following course order, no courses may be omitted. It is exclusively the responsibility of the student to see that the appropriate courses are selected in the pursuit of any of the various degrees in the College.

SAMPLE CURRICULUM FOR AN ARTS MAJOR PROGRAM

FIRST YEAR	
Fall Semester	Spring Semester
Augustine and Culture Seminar (ACS)*	Augustine and Culture Seminar (ACS)*
Introductory Philosophy	Introductory Literature
Social Science	Introductory History
Language	Language
Mathematical/Computing Sciences	Mathematical/Computing Sciences
SECOND YEAR	
Fall Semester	Spring Semester
Natural Science & Laboratory*	Natural Science & Laboratory*
Fine Arts	College Ethics
Introductory Theology	Social Science
Elective/Major/Social Science	Elective/Major/Social Science
Adv. Humanities (History/Philos)	Adv. Humanities (Theol/Literature)
THIRD YEAR	
Fall Semester	Spring Semester
Major	Major
Major	Major
Advanced Humanities	Advanced Humanities
Elective	Elective
Elective	Elective

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FOURTH YEAR	
<u>Fall Semester</u>	<u>Spring Semester</u>
Major	Major
Major	Major
Elective	Elective
Elective	Elective
Elective	Elective

*NOTE: These courses must be taken in the semester indicated.

SAMPLE CURRICULUM FOR A SCIENCES MAJOR PROGRAM

The following chart offers a sample program for students with majors in the Sciences. Students are required to meet with an assigned adviser at least once each semester in order to select courses for registration. While a student may decide to alter the following course order, no courses may be omitted. It is exclusively the responsibility of the student to see that the appropriate courses are selected in the pursuit of any of the various degrees in the College.

FIRST YEAR	
<u>Fall Semester</u>	<u>Spring Semester</u>
Augustine and Culture Seminar (ACS)*	Augustine and Culture Seminar (ACS)*
Major Science	Major Science
Science or Core	Science or Core Requirement
Mathematics	Mathematics
Foreign Language	Foreign Language
SECOND YEAR	
<u>Fall Semester</u>	<u>Spring Semester</u>
Major Science	Major Science
Major Science	Major Science
Math or Core	Math or Core
Science or Core	Science or Core
Introductory Literature	Core Elective
THIRD YEAR	
<u>Fall Semester</u>	<u>Spring Semester</u>
Major Science	Major Science
Major Science	Major Science
Science or Core	Science or Core Requirement
Advanced Humanities	Advanced Humanities
Elective	Elective

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FOURTH YEAR	
<u>Fall Semester</u>	<u>Spring Semester</u>
Major Science	Major Science
Major Science	Major Science
Science or Core	Science or Core Requirement
Advanced Humanities	Advanced Humanities
Elective	Elective

*NOTE: These courses must be taken in the semester indicated.

Students wishing to receive the Bachelor of Science in Astronomy and Astrophysics, Biology, Chemistry, Computer Science, Mathematics, Physics or the Bachelor of Science Comprehensive Program must attain a QPA of 2.00 in the science and mathematics courses taken in fulfillment of their major, as well as attaining an overall QPA of 2.00.

MAJORS, INTERDISCIPLINARY CONCENTRATIONS, AND MINORS

The following information is designed to give students a brief introduction to the requirements of the various degree programs in the College of Liberal Arts and Sciences. A significant number of courses required for Interdisciplinary Concentrations can fulfill Core Curriculum requirements. Please contact individual departments for additional information about a particular program.

AEROSPACE STUDIES PROGRAM AND MINOR (AIR FORCE ROTC)

Director: Captain Larry Beer (lbeer@sju.edu)
Department of Aerospace Studies
Saint Joseph's University
(610) 660-3190; rotc@sju.edu
<http://www.sju.edu/academics/cas/afrotc/index.html>

Air Force Reserve Officer Training Corps participation is available through a cross-enrollment agreement with St. Joseph's University.

Participation in a one through four-year program leads to a commission as a Second Lieutenant in the Air Force. Scholarships are available in any major. Additional Details are available in the Liberal Arts and Sciences Special Programs section of the Villanova Catalog.

MINOR: The minor in Aerospace Studies is offered to any student completing the proscribed courses of study. Students desiring a minor in Aerospace Studies must declare this choice no later than the add/drop period of their seventh semester. Specific English and Foreign Language courses must receive approval by the Professor of Aerospace Studies to qualify.

See the Web site address above for more information.

AFRICANA STUDIES CONCENTRATION

Director: Dr. Crystal J. Lucky
Office: 204 Old Falvey
Tel. (610) 519-4640
Web site: www.villanova.edu/artsci/africanastudies/

CONCENTRATION: The Africana Studies Concentration combines an introductory core, a number of electives, and an integrating seminar for a total of 21 credits.

MINOR: The Africana Studies Minor combines an introductory core and a number of electives for a total of fifteen credits. The list of approved electives is available from the Africana Studies office.

See the Web site address above for more information.

ARABIC

Director: Dr. Maghan Keita
Office: 433 St. Augustine Center for the Liberal Arts
Web site: www.villanova.edu/artsci/global/criticallangs/arabic/

MINOR: A minor in Arabic requires six courses offered within the Arabic Program.

See the Web site address above for more information.

ARAB AND ISLAMIC STUDIES CONCENTRATION

Director: Dr. Silvia Nagy-Zekmi
Office: 268 St. Augustine Center
Tel. (610) 519-4640
Web site: www.villanova.edu/artsci/arabislamic/

CONCENTRATION: The Arab and Islamic Studies Concentration requires **21 credits** in addition to a *minimum* of 12 credits of Arabic language courses.

MINOR: The Arab and Islamic Studies Minor requires **15 credits**.

The list of approved electives is available from the Arabic and Islamic Studies Office Studies office, St. Augustine Center, Room 268.

See the Web site address above for more information.

ART HISTORY

Chair: Dr. Marc Gallicchio, Chairperson
Office: 403 St. Augustine Center
Tel. (610) 519-4660
Web site: www.villanova.edu/artsci/history/undergrad/arhistory/
Course descriptions: www.artsci.villanova.edu/courses/art_history

The Art History major and minor are administered by the Chair of the History Department.

MAJOR: Art History majors must complete a total of 10 courses, which include a required introductory core of four courses.

MINOR: Students seeking a minor in Art History are required to earn at least 15 credit hours in art history, six of which must be the two survey courses (AAH 1101 and 1102), plus 3 credit hours in Studio Art.

See the Web site address above for more information.

ASTRONOMY AND ASTROPHYSICS

Chair: Dr. George P. McCook

Office: 456 Mendel

Tel. (610) 519-4820

Web site: <http://www.villanova.edu/arts/astronomy/>

Course descriptions: www.arts.villanova.edu/courses/astronomy

The Astronomy and Astrophysics major is designed to prepare students for graduate studies in Astronomy and related fields. The major combines rigorous academic preparation with a strong research component, which usually culminates in the presentation of original research results at national-level astronomical conferences. In addition, both the major and the minor – as combined with the strong humanities focus of the University's Core Curriculum – provide outstanding preparation for careers in science journalism and science education, as well as for essentially any technically-based career.

MAJOR: 87 credits including courses in physics, mathematics, computer science, and meteorology. Students completing the major will also qualify for a minor in physics.

MINOR: The astronomy minor is available to all students and requires 24-26 credits, including courses in physics, mathematics, and meteorology, plus any prerequisites for the required courses. The MAT courses fulfill the 2-semester Core Curriculum mathematical science requirement in the College of Liberal Arts and Sciences. With the addition of 2 appropriate lab courses, the AST or PHY courses fulfill the 2-semester natural sciences requirement.

See the Web site address above for more information.

CONCENTRATION: AUGUSTINE IN DIALOGUE WITH FAITH AND CULTURE

Chair: Dr. Kevin Hughes

Office: 304 St. Augustine Center

Tel. (610) 519-7300

Web site: www.arts.villanova.edu/augustinianconcentration

This is an interdisciplinary program, open to all students in all degree programs. Students must complete the required 18 hours for the concentration in addition to fulfilling the requirements of their major. They will maintain a portfolio of all the papers they have written throughout their course of studies in the Concentration. At the end of their first semester senior year, they will undergo an oral exam which both reviews the course material they have taken thus far, as well as lays the groundwork for the research

they will undergo in their capstone experience. The oral examination will be administered by three professors: the Director of the Concentration, and two professors who have taught them during their course of studies for the Concentration.

See the Web site address above for more information.

BIOCHEMISTRY

Program Director: Dr. Janice Knepper; Dr. Barry S. Selinsky

Office: 215 Mendel Science Center

Tel. (610) 519-4840

Web site: www.villanova.edu/arts/biochem

Course descriptions: www.villanova.edu/arts/biochem/courses/undergrad

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

MAJOR: CHM 1151/1103; 1152/1104; 2211/2201 (or 3211/3201); 2212/2202 (or 3212/3202); 3417; 3511/3501; 4621/4622/4623/4603; MAT 1500/1505 (or 1300/1305); PHY 2410/2411 (or 1100/1101); PHY 2412/2413 (or 1102/1103); BIO 2105/3351/4505. In addition, Biochemistry majors must complete one Chemistry elective and one Biology elective.

CHEMISTRY MAJOR WITH BIOCHEMISTRY CONCENTRATION:

The major provides more extensive training in physical and inorganic chemistry while providing a chemistry-centered introduction to biochemistry: CHM 1000; 1311/1301; 1512/1502; 3511/3501; 3211/3201; 3212/3202; 3311/3301; 3411/3403; 3412/3404; 4621/4622/4603; MAT 1500/1505; PHY 2410/2411; 2412/2413; BIO 2105/2106. In addition, students must select one molecular-biology based BIO elective.

RESEARCH OPPORTUNITIES: The Biochemistry program offers two mechanisms for participation in research by the undergraduate major. Departmental fellowships for 8-10 weeks of summer research are funded by industrial and government sources. Recipients of these fellowships carry out a research project under the direction of a faculty member. In addition, students are encouraged to enroll in research for academic credit during the school year (CHM 4801, 4802, 4803, or BIO 6509, 6609).

See the Web site address above for more information.

BIOLOGY

Chair: Dr. Russell M. Gardner

Office: 147 Mendel

Tel. (610) 519-4830

Web site: www.villanova.edu/arts/biology/

Course descriptions: www.arts.villanova.edu/courses/biology

MAJOR: Thirty-six credits in Biology, including BIO 2105, 2106, 3351, and 5100. Cognate requirements include: CHM 1151/1103, 1152/1104, 2211/2201, 2212/2202; MAT 1310/1315; PHY 1100/1101 and 1102/1103. In addition, Biology majors must select a minimum of five laboratory science electives from the Biology departmental offerings (five courses including laboratories) numbered 3000 and higher. At least one course with laboratory must be chosen from each of the following areas: Population Biology, Organismal Biology, Cellular/Molecular Biology. NOTE: Courses numbered below 2000 will not apply toward a major in biology.

MINOR: Twenty-three credits Biology, including BIO 2105 and 2106. Additional elective courses from Biology departmental offerings numbered 3000 and higher. These Biology electives must include at least 3 lab science courses. Minors must complete at least 12 of their Biology credits at Villanova and achieve a minimum QPA of 2.0 in those courses.

NOTE: Courses numbered 7000 to 7999 are open to fourth year students with a QPA of 3.0 or higher. Third year students with a QPA of 3.4 or higher may be eligible for enrollment in these courses with the approval of the Department of Biology and the Office of Graduate Studies.

See the Web site address above for more information.

BUSINESS MINOR

School: Villanova School of Business (VSB)

Dean: James M. Danko

Tel. (610) 519-5532

Location: The Clay Center at VSB (Bartley Hall 1054)

Students enrolled in other colleges of the University may apply to seek a General Business Minor through the Villanova School of Business (VSB).

Students must attend an information session held by VSB before applying. Information sessions are held at least once a month. Dates and times are posted at the start of the fall and spring semesters.

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Applications are available through the Clay Center at VSB (Bartley Hall 1054) and online at <http://www.villanova.edu/business/undergrad/forms.htm>. The application deadline is May 1st. Business Minor applications are reviewed once per year after spring grades are posted. Students are notified in late May. Acceptance is determined on a competitive basis.

All business courses must be taken at Villanova. Microeconomics, Macroeconomics, and the Statistics requirement may be taken elsewhere. Preapproval by the Clay Center at VSB is necessary.

The required business courses for a General Business Minor for students in the Class of 2012 are:

ECO 1001	Intro to Microeconomics
ECO 1002	Intro to Macroeconomics
VSB 1000	Information Technology (1 cr.)
VSB 1001	Business Dynamics I
VSB 1002	Business Dynamics II
VSB 2010	Financial Management & Reporting ¹ (6 cr.)
VSB 2020	Competitive Effectiveness ¹ (6 cr.)
	Statistics Requirement²

1. Prerequisites: VSB 1000, VSB 1001, VSB 1002, ECO 1001, ECO 1002. MAT 1235 (or VSB 2005) is the pre-requisite or co-requisite for VSB 2010.

2. Statistics may be fulfilled by successfully completing:

- BIO 3105 Biostatistics and Experimental Design, **OR**
- MAT 1230 and MAT 1235, **OR**
- VSB 2005 Business Statistics (or ECO 2137 or MAT 2310 or MAT 4310) may substitute for MAT 1230 and MAT 1235, the statistics sequence, if a student has successfully completed a calculus course.

Please Note: Statistics is waived for Engineers and Math Majors.

Students who successfully complete the General Business Minor may then pursue an additional VSB minor in Accounting, Business Law and Governance, Economics, Entrepreneurship, Finance, International Business, Management Information Systems, Marketing or Real Estate. **Additional coursework may be required.**

Students in the General Business Minor program must meet with Sherrylynn Pitts, the Business Minor Advisor in the Clay Center, before registering for VSB courses.

CHEMISTRY

Chair: Dr. Wm. Scott Kassel

Office: 215 Mendel Hall

Tel. (610) 519-4840

Web site: www.villanova.edu/arts/chemistry

Course descriptions: www.villanova.edu/arts/chemistry/courses/undergrad

The Chemistry major, accredited 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. Extensive opportunities for faculty-mentored undergraduate research are available for all students.

MAJOR: CHM 1000; 1311/1301; 1512/1502; 3511/3501; 3211/3201; 3212/3202; 3311/3301; 3411/3403; 3412/3404; 4611; MAT 1500/1505; PHY 2410/2411; 2412/2413. In addition, Chemistry majors must select a minimum of two Chemistry electives and one Chemistry lab elective.

MINOR: CHM 1151/1103; 1152/1104; 2211/2201; 2212/2202. In addition, Chemistry minors must select a minimum of three courses (along with appropriate laboratories) from any 3000 level courses or higher.

See www.villanova.edu/arts/chemistry/undergrad/minor for details.

BIOCHEMISTRY CONCENTRATION: The curriculum is identical to the Chemistry major except for the following: CHM 4611 and one Chemistry elective are replaced by CHM 4621/4622/4603. Three semesters of Biology are required: BIO 2105; 2106; and a molecular based biology course.

COMBINED BS/MS IN CHEMISTRY: CHM 1000; 1311/1301; 1512/1502; 3211/3201; 3212/3202; 3511/3501; 3311/3301; 3411/3403; 3412/3404; 4611; 4801; MAT 1500/1505; PHY 2410/2411; PHY 2412/2413. In addition, students must complete six graduate courses, three graduate research courses, and defend a research thesis.

RESEARCH OPPORTUNITIES: The Chemistry Department offers two mechanisms for participation in research by the undergraduate major. Departmental fellowships for 8-10 weeks of summer research are funded by industrial and government sources. Recipients of these fellowships carry out a research project under the direction of a faculty member. In addition, students are encouraged to enroll in research for academic credit during the school year (CHM 4801, 4802, 4803).

See the Web site address above for more information.

CHINESE MINOR

Director: Dr. Maghan Keita

Offices: 433 St. Augustine Center

Website: <http://www.villanova.edu/artsci/global/>

Course descriptions:

http://www.villanova.edu/artsci/global/criticallangs/chinese/minor_conc.htm

MINOR: The minor in Chinese Language and Cultural Studies requires four courses in Chinese language that may be selected from the following:

CHI 1111-Basic Chinese I

CHI 1112- Basic Chinese II

CHI 1121- Intermediate Chinese I

CHI 1122-Intermediate Chinese II

CHI-1131-Advanced Chinese I

CHI 1132-Advanced Chinese II

CHI-1133-Advanced Chinese III

CHI 1134-Advanced Chinese IV

In addition, the minor requires two elective courses that can be selected from the following:

CHI-1131-Advanced Chinese I

CHI 1132-Advanced Chinese II

CHI-1133-Advanced Chinese III

CHI 1134-Advanced Chinese IV

CHI 2134-Chinese Culture

CHI 2144-Chinese Film & Novel

CHI 3412-Chinese Special Topics

CHI 1113-Business Chinese

CHI 3413-Chinese Calligraphy

CHI 3414-Chinese Classical Thought

See the Web site address above for more information.

CLASSICAL STUDIES

Chair: Dr. Kevin Hughes

Office: 304 St. Augustine Center

Tel. (610) 519-6165

Web site: <http://www.villanova.edu/artsci/classical/>

Course descriptions: <http://www.villanova.edu/artsci/classical/courses/>

MAJOR: A major in Classical Studies generally requires a minimum of 12 courses (minimum 36 credits) in Latin or Greek. Once a sequence of language courses has begun, a student may not revert to a lower level course. Up to 2 Classics courses (taught in English: Archaeology, Mythology, etc.) may be included in the 12 course total. Classics 3001, Independent Study, will be considered a Latin or Greek course when the study is done in those languages.

MINOR: A minor in Classical Studies generally requires a minimum of 6 courses (minimum 18 credits) in Latin or Greek. Up to 2 Classics courses taught in English may be included in the 6 course total. Classics 3001, Independent Study, will be considered a Latin or Greek course when the study is done in these languages.

The Classics Program also offers literature courses in English translation. Such courses may be used to fulfill a Humanities elective; however, they may not be used toward credit requirements for a language major or minor. An upper level literature course in any language taught in the Department satisfies the advanced literature core requirement. At the same time, it may also count for the minor in a language. However, it may not count for both the advanced literature requirement and the major in a language, except for double majors.

See the Web site address above for more information.

COGNITIVE SCIENCE CONCENTRATION

Director: Dr. Charles L. Folk

Office: 252 Tolentine Hall

Tel. (610) 519-7464

Website: www.artsci.villanova.edu/cogscience/

Cognitive Science is a basic and applied science with the primary goal of explaining intelligent behavior, whether exhibited by humans, animals, or machines. The purpose of the Cognitive Science Program is to offer an interdisciplinary course of study related to

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intelligent systems emphasizing the perspectives of psychology, computer science, philosophy, biology, and engineering. The program offers both a concentration and a minor to students in all of the University's undergraduate colleges.

CONCENTRATION: The concentration requires seven courses, a five-course proscribed core, and two electives.

MINOR: the Minor requires five courses. Note: Course selections for the minor must include approved courses in three of the following five disciplines: Psychology (PSY), Computer Science (CSC), Philosophy (PHI), Biology (BIO), and Electrical/Computer Engineering (ECE).

See the Web site address above for more information.

COMMUNICATION

Chair: Dr. Bryan Crable

Office: 203 St. Augustine Center

Tel. (610) 519-4750

Website: www.villanova.edu/artscomm

Course descriptions: www.artscomm.villanova.edu/courses

ACCEPTANCE: COM 1000, Survey of Communication Studies, and COM 1100, Public Speaking, are prerequisites which must be taken in the freshman and/or sophomore years. A minimum G.P.A. of 2.5 is required to declare the major.

MAJOR (Class of 2009 and beyond): Thirty-six credit hours are required. COM 1000, Survey of Communication Studies, COM 1100, Public Speaking, and COM 1200, Introduction to Communication Research, are entry-level required courses, and should be taken in the freshman and/or sophomore years. Either COM 4001, Qualitative Research in Communication, or COM 4002, Quantitative Research in Communication, should be taken in the junior year or prior to taking the required capstone, COM 5050, Senior Project. COM 1200 will satisfy the College of Liberal Arts and Sciences Core Research Requirement.

After enrolling in COM 1000, 1100, and 1200, and declaring the Communication major, students will consult their academic advisers and choose one of the Department's specializations: *Public Relations, Journalism, Organizational Communication, Media Studies, Media Production, Rhetorical Studies, Performance Studies, and Interpersonal Communication*. Based upon the selection of specialization, students will take two (2) courses at the theory (2000) level, and five (5) courses at the advanced topics (3000) level (from at least three different specializations). A complete listing of specialization requirements and courses is available in the Communication Department main office. Students not wishing to specialize may receive a generalized Communication degree by

taking any two (2) courses at the theory level, five (5) courses at the advanced topics level (from three different specializations), and all required courses.

Some specializations will require Communication majors to choose internships, which will be used to satisfy free electives for the College of Arts & Sciences.

MINOR (Students in College of Liberal Arts and Sciences only): Survey of Communication Studies (COM 1000), plus any four courses from the major course offerings.

MINOR (Students outside College of Liberal Arts and Sciences): Survey of Communication Studies (COM 1000), plus four courses from the following list: Business & Professional Communication, Theories of Organizational Communication, Leadership, Negotiation and Dialogue, Teambuilding and Small Group Communication, Training and Development, Public Relations, Gender and Communication, Intercultural Communication, Communication and Conflict. *Courses not on this list will only count toward the minor in exceptional circumstances, and require the Department's Chair's written permission. In order to qualify for the Business Communication Minor, students must have a minimum G.P.A. of 2.75 or above, and receive a final grade of C or higher in COM 1000.*

See the Web site address above for more information.

COMPREHENSIVE SCIENCE

Director: Dr. Frederick Hartmann

Office: 103 St. Augustine Center

Tel. (610) 519-8900

Website: www.artsci.villanova.edu/comprehensivesci/

MAJOR: The Comprehensive Science program is designed to allow students interested in the physical and life sciences to get a broad based and thorough exposure to a full spectrum of scientific concerns and practices. The information provided here is a basic outline of the comprehensive science requirements. The elective courses taken may vary based upon special interest or concentrations selected by the student.

The following courses are required of Comprehensive Science majors:

CSC 1051 Algorithms and Data Structures I

BIO 2105, 2106 General Biology I and II

CHM 1151/1103 General Chemistry I and Laboratory

CHM 1152/1104 General Chemistry II and Laboratory

MAT 1500/1505/2500 Calculus I, II and III

PHY 2410/2411 University Physics: Mechanics and Laboratory

PHY 2412/2413 University Physics: Electricity & Magnetism & Laboratory

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or

PHY 2414/2415 University Physics: Thermodynamics and Lab

One Mathematics course selected from the following:

MAT 2705 Differential Equations with Linear Algebra

MAT 4310 Statistical Methods

Additionally students must complete at least SEVEN upper level science electives with appropriate laboratories chosen in consultation with the student's advisor.

The degree program allows for students to design a concentration in a particular discipline or an interdisciplinary field. Some sample concentrations follow:

Biological-Chemistry Biology

Chemistry Cognitive Science

Environmental Studies Pre Dental

Mathematics Pre Medical

Pre Optometry Physics

See the Web site address above for more information.

COMPUTER SCIENCE

Chair: Dr. Robert E. Beck

Office: 161 Mendel Science Center

Tel. (610) 519-7307

Website: www.csc.villanova.edu

Course descriptions: www.csc.villanova.edu/academics/courses

A Computer Science major explores a broad spectrum of computing technologies and concepts. The courses provide a thorough foundation in the principles and practices of computing, paving the way for a successful career and graduate studies. The students also learn skills in communication and the scientific, mathematical, and engineering principles that support the computing disciplines. The program is designed to develop the total person, one with intellectual curiosity, mature judgment, a thirst for life-long learning, and a commitment to the betterment of society.

MAJOR: CSC 1051, 1052, 1300, 1700, 1800, 2053, 2400, 2405, 3990, 4170, 4700, and 4790 plus three departmentally approved elective courses; MAT 1500, 1505, and 2310; PHI 2180; a two semester science sequence with co-requisite laboratories selected from an approved set of courses in Astronomy, Biology, Chemistry or Physics; and one more approved science or engineering course. A specific list of approved electives and approved science/engineering courses can be obtained from the department

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web site <http://www.csc.villanova.edu>. A total of 26 credits in science and mathematics is required. The major in computer science is accredited by the Computing Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET).

MINOR: CSC 1051, 1052, 2400 or ECE 3445, CSC 1300, CSC 1700, CSC 2053, and two elective courses chosen from the list of approved courses available from the department office or department web site.

The Information Science Minor focuses on the acquisition, representation, storage, indexing, manipulation, retrieval and management of information in all its forms--text, audio, video, image, animation, and hypermedia

INFORMATION SCIENCE MINOR: CSC 1051, 1052, 1300, 2500, 3400, and two elective courses chosen from the list of approved courses available from the department office or department web site.

See the Web site address above for more information.

CRIMINAL JUSTICE

Director: Dr. William Waegel

Office: 204 St. Augustine Center

Tel. (610) 519-4740

Web site: www.villanova.edu/artsci/sociology/undergrad/criminaljustice

Acceptance: To be accepted as a Criminal Justice major applying students must have earned a "C" or better in CRJ 1000, Introduction to Criminal Justice.

The Criminal Justice Major is an interdisciplinary program designed to provide students with an understanding of the causes, social functions, societal reactions, nature and application of criminal law. Rather than a technical program which focuses on applied skills (e.g. vocational skills), our program will emphasize the justice component. This program will educate students in diverse theories exploring the many social dimensions of crime and effectiveness (and implications) of current criminal justice policies.

Required Courses:

CRJ 1000 Introduction to Criminal Justice

CRJ 3000 Criminology

CRJ 3200 Police and Society

CRJ 3300 Criminal Courts

CRJ 3400 Penology and Corrections

CRJ 5100 Criminological Theory

CRJ 6500 Senior Seminar

One of the following:

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CRJ 5200CJ Research, Methods and Statistics

SOC 5300Data Analysis for Social Scientists

SOC 5400Applied Research Methods

Two Approved Electives

Requirements for a Minor in Criminal Justice (5 courses)

Required courses are Intro. to Criminal Justice (CRJ 1000) and Criminology (CRJ 3000 or SOC 3000), and three other criminal justice courses chosen from the offerings of the department. Philosophy of Criminal Justice (PHI 2140) is strongly recommended as one of the three elective courses. The student must inform the chair of his or her intention to minor and request certification of the minor when it has been completed.

See the Web site address above for more information.

EAST ASIA STUDIES CONCENTRATION

Director: Dr. Joanna Rotté

Office: 224 St. Augustine Center

Tel. (610) 519-4761

Web site: www.villanova.edu/artsci/eastasian/

The East Asia Studies Concentration is an interdisciplinary program that is open to students in all degree programs and in all four undergraduate colleges. The main goals of the program are to equip students with basic competence in the history, politics, philosophies, languages, and cultures of the region, while also emphasizing A complex and connective understanding and appreciation of the region's diversity; and the acquisition of basic research skills aimed at a deeper understanding of a particular problem, idea, or event in the region.

CONCENTRATION: Students are required to take a minimum of 24 credit hours in the following areas:

- Minimum of two semesters of an Asian language at the intermediate level;
- One of the core courses that provide an overview of the region;
- Five Elective courses (15 credits) (the list below is indicative of the course offered);
- Senior research capstone seminar paper on a topic related to the Asia/Pacific region.

Other courses, including those taken in approved overseas studies programs, may count towards the concentration at the discretion of the director.

See the Web site address above for more information.

ECONOMICS

Chair: Dr. Wen Mao

Office: 2015 Bartley

Tel. (610) 519-4370

Web site: www.villanova.edu/business/academics/undergrad/programs/economics/

Course descriptions: www.artsci.villanova.edu/courses/economics

BACHELOR OF ARTS IN ECONOMICS: Students in the College of Liberal Arts and Sciences who specialize in Economics earn the degree of Bachelor of Arts in Economics. Such students must take Calculus (MAT 1320 or higher) either to satisfy their math requirement or as a free elective. They should take ECO 1001 and ECO 1002 as two of the three social science courses in the Freshman or Sophomore year. In addition, students must successfully complete: ECO 2101, 2102, VSB2005 (or equivalent), 3132 (to satisfy the college research requirement), 4132; and 12 elective Economics credits (courses numbered above 3000). Students may receive a Specialization certificate by choosing to specialize in one of the following areas – (Business Economics, Global Economics, Human Resource Economics, or Pre-Law) by taking, as part of their 12 elective credits, three courses within their specialty and focusing their seminar paper (ECO 4132) on that specialty area.

MINOR: Students must take Calculus (MAT 1320 or equivalent), and complete a total of 18 credits consisting of ECO 1001, 1002, 2101, 2102, and two elective courses with course numbers ECO 3000 or above.

For a list of economics courses, please see the Economics listing in the catalog for the Villanova School of Business.

See the Web site address above for more information.

EDUCATION, SECONDARY

Chair: Dr. John Durnin

Office: 302 St. Augustine Center

Tel. (610) 519-4620

Website: www.villanova.edu/artsci/education/

Course descriptions: www.artsci.villanova.edu/courses/education

The Department of Education and Human Services secondary teacher education program seeks to develop prospective teachers able to meet the demands of teaching in a variety of school environments, public and private, urban and suburban. Provisions for professional competencies and teacher certification include a thorough grounding in the

College of Liberal Arts and Sciences

liberal arts, a substantial concentration in an area of specialization and a study of the foundations, principles and methods of education.

NOTE: In addition to the Education major, it is recommended that students earn a second major in their teaching area. Education majors Education majors and minors must come to the Department each semester for advising.

ADMISSION REQUIREMENTS: Secondary Education candidates apply the first semester of their sophomore year in anticipation of completing 47 or 48 credits that semester. Application requirements include a minimal 2.8 GPA, six credits in English and mathematics respectively, two letters of recommendation from professors, and an essay. For a complete listing of requirements, see the Undergraduate Student Handbook.

MAJOR: In addition to the teaching subject area requirements* described in the sequence charts that can be obtained at our office, Secondary Education majors are required to earn a total of 30 credit hours in Education courses. These are: EDU 2201 or 2202, 2300, 3251, 3263, 4290, 4291, and an appropriate teaching methods course. The coursework includes a full time student teaching experience which is open only to students in their senior year who have completed all of the subject matter courses in their field of specialization. NOTE: For Education majors, the upper level philosophy requirement is met by EDU 4290 (Philosophy of Education).

PENNSYLVANIA TEACHER CERTIFICATION: Students are required to have a GPA of 3.0 at graduation and are also required to successfully complete the state mandated Praxis series of examinations.

AREAS OF CERTIFICATION:

Biology Citizenship Education Spanish
Chemistry Social Studies French
General Science Communication German
Mathematics English Italian
Physics Latin

MINOR: A minor in Education does not lead to teacher certification but exposes students to the field of education. It requires 15 credits including: EDU 2202, 3251, 3263, and 4290. An additional three credits must be earned from among the following: EDU 2201, 2300, 3258, 3260, 3262, 3265, 3266, 4301.

See the Web site address above for more information.

ENGLISH

Chair: Dr. Evan Radcliffe
Office: 402 St. Augustine Center
Tel. (610) 519-4630
Website: www.villanova.edu/artsci/english/

MAJOR: Thirty-three hours in advanced English courses (numbered 2000 or above) including:

- Junior Research Seminar (English 2250)
- Two courses in British/Irish literature pre-1800 from two of three areas: (1) Medieval; (2) Renaissance (to 1649); (3) Restoration and Eighteenth Century.
- Two courses in literature after 1800: one in British/Irish literature and one in American literature. One of these courses must be in 19th century literature and one must be in literature after 1900.
- Senior Seminar (English 5000)
- Five electives

English majors must take the Junior Research Seminar before they complete their junior years. The English Department recommends that they consider taking it as sophomores.

British Literary Tradition I (English 2101) is not required, but the English Department recommends that English majors take it early, since it introduces writers, texts, and issues that are crucial to most subsequent courses.

British Literary Tradition 1 and 2 (2101, 2102) and American Literary Tradition 1 and 2 (2103, 2104) can operate as free electives with a maximum of two permitted toward the major and the college Advanced Literature requirement.

MINOR: Fifteen hours including:

- At least one course from the British/Irish literature offerings (mostly 3000-level courses).
- At least one course from the American literature offerings (mostly 4000-level courses).
- At least three electives from the English departmental offerings (numbered 2000 or above).

See the Web site address above for more information.

ENVIRONMENTAL SCIENCE AND STUDIES

Chair Dr. Francis A. Galgano Jr.

Chair, Dept of Geography and the Environment

Office: Mendel G-67-D

Website: www.villanova.edu/artsci/geoenv

Concentration: Dr. Lisa J. Rodrigues, Director

Website: www.artsci.villanova.edu/envstuds

Environmental programs at Villanova University include the: Environmental Science major, Bachelor of Science; the Environmental Studies major, Bachelor of Arts; and the Environmental Studies Concentration. The Department of Geography and the Environment administers each academic program.

Bachelor of Science, Environmental Science major (133 credit hours):

Environmental science is the study of interactions among physical, chemical, and biological components of the environment. Environmental Science provides an integrated, quantitative, and interdisciplinary approach to the study of environmental systems. Students enrolled in this new and dynamic major will learn how to monitor the quality of the environment, interpret the impact of human actions on ecosystems, and develop strategies for restoring natural systems. In addition, students will learn how to help planners develop and construct buildings, transportation corridors, and utilities that protect water resources and reflect efficient and beneficial land use. This is a highly interdisciplinary major, thus, students will work in multi-disciplinary teams to analyze complex environmental problems, examine environmental laws and policy decisions that require specific environmental protocols, and develop methods to promote public awareness of environmental problems.

For more information about the Environmental Science major, see our website:
www.villanova.edu/artsci/geoenv

Bachelor of Arts, Environmental Studies major (124 credit hours):

The Environmental Studies major focuses on the systematic study of human interaction with the natural environment. Today's environmental problems have evolved into highly complex and interdisciplinary issues involving political, economic, social, as well as physical and biological considerations. Modern environmental studies programs include the examination of urban and natural environments. Society needs educated people capable of addressing current and future environmental problems from a holistic approach, one that emphasizes linkages between human and natural systems. These may include urban environments, land use planning and management, environmental pollution, sustainability, or economic growth and its impact on natural resources. These relationships must be analyzed and understood in order to address successfully environmental problems at local, regional, and global scales.

For more information about the Environmental Studies major, see the Web site:
www.villanova.edu/artsci/geoenv

The Environmental Studies Concentration: The Concentration promotes an interdisciplinary approach to environmental issues through coursework and independent study/internship experiences. Several requirements of the Concentration also fulfill requirements in the student's major and/or the Core Curriculum. The Concentration is open to students from all colleges and all majors.

Courses are subdivided into four categories. Students take all of the courses in:

Category A (required): including GEV 1050, GEV 1051, GEV 4000, PHI 2121, an independent study course (internship or senior thesis or independent /group project) in the student's major, and one course each in statistics (e.g., MAT 1230, 1235, 1250, 2310, 4310 or BIO 3105) and calculus (several possible).

In addition, students take at least one course in each of three categories:

Category B-NATURAL SCIENCE AND GEOGRAPHICAL TECHNIQUES: (BIO 3255, GEV 1500, 4050, 4101, 4250, 4300),

Category C-POLICY AND MANAGEMENT: (GEV 5100, 5200, 5300, ECO 1104, PSC 2600, 2625, 3800), and

Category D-ENVIRONMENTAL SOCIAL SCIENCES & HUMANITIES: (GEV 2000, 2100, 2200, 2300, HIS 2276, PHI 2160, 2430, PJ 2200, SOC 3750). Occasionally, other courses (e.g., courses taken overseas) may be used to fulfill requirements by permission of Director.

A modified curriculum is available for students in Civil and Environmental Engineering. Please see the Director and visit the website for advice on completing the Concentration.

See the Web site address above for more information.

ETHICS – CONCENTRATION AND MINOR

Director: Dr. Mark Doorley

Associate Director: Brett Wilmot, Ph.D.

Office: 485 St. Augustine Center

Tel. (610) 519-4692

Fax. (610) 519-8026

Web site: www.villanova.edu/artsci/ethics/

Course descriptions: www.artsci.villanova.edu/courses/ethics

College of Liberal Arts and Sciences

The University believes that issues of ethics and values are at the heart of every human endeavor. In addition to regular requirements in the sciences and humanities, the College of Liberal Arts and Sciences and the Villanova School of Business require each student to take a special multidisciplinary course in ethics, typically in the sophomore year. The purpose of this course is to give students the opportunity to examine and discuss both ethical theories and their applications to contemporary moral issues. This course is designed to contribute to the implementation of Villanova's mission statement which states that, as a Catholic institution Villanova both emphasizes the values of the Jewish and Christian humanistic traditions and concerns itself with all value systems.

CONCENTRATION: The Ethics Concentration offers students an opportunity to pursue in-depth an intellectual discipline that studies human character and conduct. Each student in the concentration selects one of four tracks: Ethics and Health Care; Ethics, Politics and Law; Ethics Economics and Public Policy; or Ethics, Science, Technology and Environment. Concentrators must also fulfill the service requirement.

Required Courses for all tracks: ETH 2050 and ETH 4000

Service component: A minimum of 100 hours of approved service, including work with the poor or otherwise marginalized members of our society and/or work related to building a sustainable world environment. This component affords students the opportunity to engage in practical moral inquiry. The student, in conjunction with the program director, will arrange and design the service with the goal of enhancing comprehension of applied ethical issues in the track selected by the student.

Ethics Minor: The Ethics Program offers an ethics minor that is open to all undergraduate students at Villanova University. The rationale for this academic program is based on two pillars. First, Villanova University prides itself on presenting an educational alternative built around a clear ethical core, in particular, the moral teachings of the Catholic Church. An ethics minor allows students to pursue the study of ethics explicitly and in depth as part of their undergraduate education but without committing to the more extensive demands of a concentration. This minor contributes directly to the mission of the university. Second, a focus on 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 jobs on completion of their studies.

Academic Requirements: ETH 2050 is the gateway course for the ethics minor. Ordinarily, a student must earn a B or better in ETH 2050 to be eligible for the minor. Generally, a student will declare the minor after completing ETH 2050. In discussion with the faculty of the Ethics Program, the student will create a course of study that pursues a thematic program or question that the student identifies. To complete the requirements for the Ethics Minor, a student must prepare an E-Portfolio which will collect representative written work that he or she has done for the courses taken in pursuit of the minor, including the work for ETH 2050. A student is required to complete two

upper-level ethics courses in theology and two upper-level ethics courses in philosophy. Each semester the courses that will count toward the minor will be marked in the Master Schedule.

See the Web site address above for more information.

FRENCH AND FRANCOPHONE STUDIES

Chair: Dr. Mercedes Juliá

Program Coordinator: Dr. Jan Rigaud

Office: 303 St. Augustine Center

Tel. (610) 519-6955

Website: www.classicalmodernlanglit.villanova.edu/french

Course Descriptions: www.artsci.villanova.edu/courses/french

MAJORS: Majors in French and Francophone Studies are required to take ten courses above the intermediate level (1122). Once a sequence of language courses has begun, a student may not revert to a lower level course. This does not apply to upper level courses (above 1132). French 1133 and the research seminar ML 2100 are required for all majors in French.

MINORS: For a minor in French four courses above the intermediate level in the language are required.

The Department of Modern Languages and Literatures also offers literature courses in English translation. Such courses may be used to fulfill a Humanities elective; however, they may not be used toward credit requirements for a language major or minor. An upper level literature course in any language taught in the Department may satisfy the advanced literature core requirement. At the same time, it may also count for the minor in a language. However, it may not count for both the advanced literature requirement and the French and Francophone Studies major, except for double majors.

Students may obtain up to six credits through the Villanova summer program abroad in France.

See the Web site address above for more information.

GEOGRAPHY

Chair: Dr. Francis A. Galgano Jr.

Office: Mendel G-67-D

Website: www.villanova.edu/artsci/geoenv/

Program Director: Dr. J. Harold Leaman

College of Liberal Arts and Sciences

Tel. (610) 519-4663

Course descriptions: www.artsci.villanova.edu/courses/geography.html

The Geography major is an integrating, multi-disciplinary academic program within the Department of Geography and the Environment. The geography major focuses on linkages between human and natural environments within a spatial context using state-of-the-art technology such as satellite imagery, GPS, computer mapping, and Geographic Information Systems. Geography majors receive an integrated education that focuses on the spatial dynamics of economic, political, cultural, and environmental systems. The major is dynamic, focuses on critical global trends, and has applicability to a wide variety of fields in government, science, education, business, and engineering. Individual programs are formed around major geographic problems and world regions. The department offers course work in four areas (1) human systems analysis; (2) geographical techniques; (3) regional analysis; and (4) environmental analysis and human dimensions of global environmental change.

MAJOR: At least 30 credits in geography. The distribution is given below:

- Introductory Courses (9 credits): GEV 1001 (International Approaches to Geography), 1500 (Physical Geography), and 1750 (Geography Techniques)
- Regional Geography (3 credits): Any one of five regional courses (i.e., Europe, North America, Asia, Africa, and the Middle East)
- Geographical Technology (3 credits): One of four geo-techniques courses (i.e., Remote Sensing, Geographic Information Systems, Advanced Cartography; Air Photo Interpretation)
- Research Seminar (3 credits): GEV 2500 (Global Change in Local Places)
- Senior Seminar or Independent Study (3 credits): One GEV 6000-level course
- Geography Electives (9 credits): Any focused program developed from the remaining 1000, 2000, 3000, 4000, 5000, and 6000 series courses

MINOR: Requirements are: GEV 1000 introductory courses (3 credits); GEV 3000 regional courses (3 credits); and 9 credits from any combination of the 1000, 2000, 3000, 4000, 5000, and 6000 series courses.

Majors and Minors who meet certain academic standards are eligible for membership in The Eta Lambda chapter of Gamma Theta Upsilon, The International Geography Honors Society, which annually sponsors activities, lectures, and field trips. Internships designed for geography majors are also available. Geography students participate in professional conferences and student paper competitions in regional professional societies.

See the Web site address above for more information.

GENDER AND WOMEN'S STUDIES

CoDirec Catherine Kerrison, Ph.D., and Lisa Sewell, Ph.D.
Office: 204 Old Falvey
 610-519-3815
Web Site <http://www.villanova.edu/artsci/gws/>

The Gender and Women's Studies Program is an interdisciplinary program providing courses, a minor, and a concentration in Gender and Women's Studies. It is open to students in all degree programs. In addition to the courses listed below, Gender and Women's Studies generates new, specialized topics courses each semester. Please check the Web site for current course offerings.

MINOR: The minor in Gender and Women's Studies requires students to take a total of six courses including GWS 2050-Introduction to Gender and Women's Studies, and GWS 5000-Integrating Seminar, which is taken as a culminating course.

CONCENTRATION: The concentration requires a total of eight courses, including GWS 2050 and GWS 5000.

Introduction to Gender and Women's Studies is offered every fall semester, and the Integrating Seminar is offered every spring. Other courses for the GWS minor or concentration may be taken in a variety of departments, reflecting the interdisciplinary nature of gender and women's studies, as long as they are designated with the Gender and Women's Studies attribute (a partial list appears below) on the NOVASIS Master Schedule and/or approved by the Academic Director of the Gender and Women's Studies program.

GWS 2050 Introduction to Gender and Women's Studies

GWS 3000 Independent Study

GWS 5000 Integrating Seminar (required; topic varies) AAH 3001 Women in Art

COM 3406 Gender and Communication

COM 3346 Gender and Film

ENG 2300 Women in Literature
HIS 2296 History of American Women
HIS 3360 Women in Pre- Modern Western Civilization
NUR 4800 Women's Health Issues
PHI 2420 Philosophy of Women

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PHI 4900	Feminist Theory
PJ 2800	Race, Class and Gender
PSC 2700	Women and Politics
PSY 3000	Psychology of Women
SOC 2300	Sociology and the Family
SOC 3500	Sociology of Gender Roles
THL 5850	Women in Religion and Society

Topics – GWS Director can approve other courses offered by departments. (Please see Master Schedule.)

See the Web site address above for more information.

GERMAN

Chair: Dr. Mercedes Juliá

Program Coordinator: Dr. Charles Helmetag

Office: 303 St. Augustine Center

Tel. (610) 519-7794

Web site: www.classicalmodernlanglit.villanova.edu/german

Course descriptions: www.artsci.villanova.edu/courses/languages

MAJOR: Due to lack of enrollment, the major in German has been discontinued at Villanova. Students who registered to have a major in German prior to August 21, 2008, may continue with their studies until they have fulfilled all course requirements. New majors are not permitted at this time. Those who are already registered are required to take 10 courses above the intermediate level (1122). Once a sequence of language courses has begun, a student may not revert to a lower level course. This does not apply to upper-level courses (above 1132). Junior and Senior majors must satisfy a one-semester research requirement by enrolling in either German 3212 or 3213.

MINOR: Due to lack of enrollment, Villanova is no longer accepting minors in German. Students who registered prior to August 21, 2008, will be allowed to finish their minor. For a minor in German, four courses above the intermediate level in the language are required.

The Department of Modern Languages and Literatures also offers literature courses in English translation. Such courses may be used to fulfill a Humanities elective; however, they may not be used toward credit requirements for a language major or minor. An upper-level literature course in any language taught in the Department satisfies the advanced literature core requirement. At the same time, it may also count for the minor in a language. However, it may not count for both the advanced literature requirement and the major in a language, except in the case of double majors.

Students may obtain up to six credits through the Villanova summer programs abroad in Germany.

GLOBAL INTERDISCIPLINARY STUDIES

Director: Dr. Maghan Keita
Offices: 443 St. Augustine Center
Web site: <http://www.villanova.edu/artsci/global/>

The Institute for Global Interdisciplinary Studies is rooted in and committed to the Augustinian and Catholic tradition of an inspired intellectual community, oriented by a quest for justice and peace. In a world beset by crisis, the mission of the Institute is to train a dedicated cadre of students who see themselves as problem-solvers and advocates for justice and peace worldwide.

MAJOR: The Institute for Global Interdisciplinary Studies provides a unique and dynamic course of study that consists of 10 courses comprising 36 credit hours for the completion of the major. The 10-course sequence has as its center a five-seminar core that consists of the Proseminar: Introduction to Global Interdisciplinary Studies; the Junior Research Seminar; and the Senior Capstone Colloquium.

These courses are mandatory. In addition to these three, the student will choose two other seminars to complete the core. All seminars will be team-taught and capped at 15 students. Seminars are open to the University population at large; however, Global Studies majors will receive priority. The remaining element of the IGIS curriculum will be satisfied by the selection of five more courses, seminar and/or lecture-discussion in areas of the student's choosing, which correspond to the designed plan of study. Currently, there are approximately 200 courses from which a student might choose.

All students majoring in Global Interdisciplinary Studies must complete the College of Liberal Arts and Sciences language requirement of proficiency in the language of their choosing at the intermediate level. Language choices for Global Interdisciplinary Studies majors will complement their selected areas of studies. The choice of language, along with the overall course of study, will be augmented by a mandatory semester abroad that will focus on language and cultural immersion.

Student initiative and responsibility are central to the design and the completion of a successful course of study as an Institute for Global Interdisciplinary Studies major. In conjunction with the Institute director and a faculty mentor of each student's choosing, the student will create her/his own major. The major will be tailored to the interests of the individual student. Students will be in ongoing consultation with the director and their mentor to refine the course of study.

MINOR: While the Institute offers no minor per sé, minors are possible within the area of Critical Language and Cultural Studies for Arabic, Chinese, Japanese, and Russian. Information concerning the requirements for these minors can be found on their respective pages. In addition, students interested in minoring in those areas should

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consult their websites. These can be accessed through the Institute for Global Interdisciplinary Studies website.

Acceptance: Admission to the major for Global Interdisciplinary Studies is open to all students of the College of Liberal Arts and Sciences who are in good standing. Students must fill out the application and complete its essay prior to admission.

See the Web site address above for more information.

HISTORY

Chair: Dr. Marc Gallicchio, Chairperson

Office: 403 St. Augustine Center

Tel. (610) 519-4660

Website: www.villanova.edu/artsci/education/

Course descriptions: www.artsci.villanova.edu/courses/history

MAJOR: History majors must earn 27 credits in history beyond the basic World History course (Themes in Modern World History [HIS 1050] or Themes in Pre-Modern World History [HIS 1040]). *Effective Fall 2007*, the ten courses required for the major now must include:

- History 1040 or 1050
- Either HIS 2000, Investigating US History I, or HIS 2001, Investigating US History II;
- At least one junior research seminar;
- History 5501 (Seminar in Historical Methodology) or History 5515 (Independent Research);
- At least six additional history courses of the student's choice.

MINOR: History minors are required to earn 18 credit hours in history. For students in the College of Liberal Arts and Sciences, the 18 credit hours must include HIS 1050, Themes in Modern World History, or HIS 1040, Themes in Pre-Modern World History.

The following courses may also be taken for credit toward the History major or minor:

- AAH 1101 History of Art: Beginnings to Renaissance
- AAH 1102 History of Art: Renaissance to Contemporary World

See the Web site address above for more information.

HONORS PROGRAM

Director: Dr. Edwin L. Goff

Office: 103 St. Augustine Center

Tel. (610) 519-4650

Website: www.honorsprogram.villanova.edu

Course descriptions: www.artsci.villanova.edu/courses/honors

The University Honors Program is a comprehensive four-year curriculum of small seminars designed to foster the free and open exchange of ideas among students and faculty. Honors courses emphasize extensive reading and writing, and attempt to develop the critical abilities of judgment and analysis. Innovative courses include team-taught seminars and seminars given by visiting professors. All Honors courses are enriched by a variety of lectures, cultural events, and social activities.

Students in the College of Liberal Arts and Sciences may pursue the degree of B.A or B.S. Honors Program. The Honors Program Sequence in Liberal Studies (the Honors Program Interdisciplinary Concentration) is open to students in all colleges.

Acceptance: 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 QPA). Individual Honors courses are open to all Villanova students who have at least a 3.0 overall QPA or will bring a special expertise to the course, contingent upon class size limitations. Admission to all Honors courses requires the permission of the Director.

All first-year Honors students are required to complete a two-semester Gateway Portfolio Project: HON 1996 Gateway Portfolio I; and HON 1997 Gateway Portfolio II.

All second-year Honors students intending to pursue an Honors major, or the Honors Interdisciplinary Concentration are required to complete HON 1998 Gateway Portfolio III; and HON 1999 Gateway Portfolio IV.

Each Portfolio course is one-credit, and is graded Satisfactory/Unsatisfactory; the one-credit Portfolio course is taken in addition to each student's normal course load each semester.

B.A.H. Degree: Twelve Honors courses, including:

- The Humanities Seminar HON 2550, or the Social Science Seminar HON

College of Liberal Arts and Sciences

2560;

- A five credit HON 6001 & HON 6002, or six-credit HON 6000 & HON 6002 senior thesis, and Three upper-level courses not used to fulfill core requirements.

Students receiving a Bachelor of Arts, Honors Degree, will not receive another Bachelor of Arts Degree at graduation. Any additional major will be listed on the student's transcript.

B.S.H. Degree: Ten Honors courses, including:

- The Natural Science Seminar, HON 2570,
- A five-credit senior thesis HON 6001 & HON 6002 , and
- Three upper-level courses which may be used to fulfill core requirements.

Honors Program Sequence (Concentration) in Liberal Studies:

Eight courses in Honors, at least three of which must be upper level.

At least one of the upper-level seminars must be selected from:

The Humanities Seminar HON 2550, or
The Social Science Seminar HON 2560, or
The Natural Science Seminar, HON 2570

All Honors Program certifications require a minimum overall QPA of 3.33, and satisfactory completion of the four-semester Gateway Portfolio Project. Honors classes may be used to fulfill Arts and Sciences requirements and electives for students in all of the undergraduate colleges.

For first- and second-year students, the Program offers Honors seminars in place of the core curriculum introductory courses in the humanities and social sciences. Some students are invited to take multi-credit, team taught interdisciplinary seminars (HON 1000, 1050, 2000 series), which examine the major works of Western and World Civilization in place of regular core requirements. This Honors core for students pursuing the degrees B.A.H or B.S.H. culminates with specially designed seminars on methodology, current issues, and ethical questions in the humanities (HON 2550), social sciences (HON 2560), or natural sciences (HON 2570).

On the advanced level, the Honors Program offers a variety of seminars that include traditional themes of enduring significance, timely issues of concern, and interdisciplinary studies not available elsewhere in the college. All have in common small student enrollment, active class participation, and intensive writing requirements. Specific offerings change from semester to semester to reflect the

Villanova University

interests of faculty and students in the Program.

All upper-level seminars also fulfill major, concentration, and minor requirements in specific academic disciplines.

See the Web site address above for more information.

HUMANITIES

Chair: Dr. Kevin Hughes
Office: 304 St. Augustine Center
Tel. (610) 519-6165
Website: www.humanities.villanova.edu

The Department of Humanities offers an integrated, interdisciplinary curriculum. This is available to Humanities majors as well as to students at Villanova University generally. In some cases, Humanities courses will fulfill certain requirements for the Core Curriculum of the College of Liberal Arts and Sciences.

MAJOR: The Humanities major requires the completion of 10 courses. Four Gateway Courses are required of all majors, which are: HUM 2001: God, HUM 2002: Human Person, HUM 2003: World, HUM 2004: Society (see course descriptions below). Students then take five free electives, two of which have to be taken within the Department of Humanities. Finally, in senior year, Humanities majors take HUM 6500: Senior Capstone Seminar.

MINOR: Students must take two of the four Gateway Courses: HUM 2001, HUM 2002, HUM 2003, HUM 2004 plus three electives two of which must be taken in the Humanities Department.

See the Web site address above for more information.

HUMAN SERVICES

Chair: Dr. John Durnin
Office: 302 St. Augustine Center
Tel. (610) 519-4620
Web site: www.villanova.edu/artsci/education/
Course descriptions: www.artsci.villanova.edu/courses/Humanservices

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The Human Service program is designed for students who desire a degree in the helping professions. The foundation of this program is a strong grounding in the liberal arts supplemented by an experiential component. The program culminates in a 6 credit practicum with specialization in care-giving, counseling, human resources, or non-profit groups.

ACCEPTANCE: Human Services candidates may declare the major during the sophomore year. A minimum GPA of 2.5 is required for acceptance. Students not meeting this requirement may petition the Chair for acceptance into the program. To declare the major, come to the offices of the Department of Education and Human Services.

MAJOR: The requirements for a major in Human Services include the following courses: HS 2000, 2100, 2200, 3000, 3100, 3400, 4000, and 4100. HS Majors must also complete minors in Psychology and Sociology, which include the following required courses: Psychology 1000, 2200, 2500, 2600, and one elective; Sociology 1000, 2200, 2300, 3600, and one elective.

MINOR: A minor in Human Services requires a total of 15 credits. Distribution requirements are: HS 2000, 2100, 3000, 3100. An additional 3 credits must be earned from one of the following: HS 2200, 3400, 3500, 3600, 3700.

See the Web site address above for more information.

IRISH STUDIES CONCENTRATION

Director: Dr. James J. Murphy
Office: 467 St. Augustine Center
Tel. (610) 519-4647
Website: www.artsci.villanova.edu/irishstudies/

Irish Studies explores the history and culture of the Irish people from different perspectives—literature, history, art, politics, and folklore. The program is open to students from all colleges. Interested students may also study in Ireland either in a Semester Abroad program or with the Villanova in Ireland Summer program at NUI Galway. Details are available in the Irish Studies Office.

CONCENTRATION: Fifteen credits including two core courses, ENG 2500 and HIS 3216, and any three of the following: AAH 3007; ENG 2450, 2460, 2490, 2500, 2700, 3615; HIS 3214, 3215; PSC 4950, 6875.

See the Web site address above for more information.

ITALIAN

Chair: Dr. Mercedes Juliá

Program Coordinator: Dr. Gaetano Pastore

Office: 303 St. Augustine Center

Tel. (610) 519-4696

Website: www.classicalmodernlanglit.villanova.edu/italian/

Course descriptions: www.artsci.villanova.edu/courses/italian

MAJOR: Majors in Italian are required to take ten courses above the intermediate level (1122). Once a sequence of language courses has begun, a student may not revert to a lower level course. This does not apply to upper level courses (above 1132). Research Seminar: ML 2100 is required of all majors in Italian.

MINOR: For a minor in Italian four courses above the intermediate level in the language are required.

The Department of Classical & Modern Languages and Literatures also offers literature courses in English translation. Such courses may be used to fulfill a Humanities elective; however, they may not be used toward credit requirements for a language major or minor. An upper level literature course in any language taught in the Department satisfies the advanced literature core requirement. At the same time, it may also count for the minor in a language. However, it may not count for both the advanced literature requirement and the major in a language, except in the case of double majors.

Students may obtain up to six credits through the Villanova summer programs abroad in Italy.

See the Web site address above for more information.

JAPANESE MINOR

Director: Dr. Maghan Keita

Office: 443 St. Augustine Center

Web site: <http://www.villanova.edu/artsci/global/>

Course descriptions:

<http://www.villanova.edu/artsci/global/criticallangs/japanese/minor.htm>

MINOR: The minor in Japanese Language and Cultural Studies requires four courses in Japanese language through the intermediate level (JPN 1111- Introduction to Japanese I / JPN 1112- Introduction to Japanese II, and JPN 1121- Intermediate Japanese

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I / JPN 1122- Intermediate Japanese II). In addition, students must also select two courses from the following list of electives:

- JPN 1131- Advance Japanese I
- JPN 1132- Advance Japanese II
- JPN 2100 Japanese Literature in English Translation
- JPN 2102 Japanese Film
- JPN 2115 Women in Asia
- JPN 2143 Japanese Animation: Art, Culture & Communication
- JPN 2144 Japanese Culinary Culture
- JPN 3412 Special Topics

LATIN AMERICAN STUDIES CONCENTRATION

Director: Dr. Satya Pattnayak
Office: 273 St. Augustine Center
Tel. (610) 519-4773
Website: www.villanova.edu/artsci/latinamerstudies/

The Latin American Studies Program is an interdisciplinary program that provides two degrees: a Minor and a Concentration. It is open to all students in the University's four undergraduate colleges.

CONCENTRATION: A total of 24 credits are needed to satisfy the requirements for a Concentration. Two courses in Advanced Spanish language (6 credits), LAS 3950 (3 credits), and any combination of five courses (15 credits) from the list below will suffice.

MINOR: A total of 21 credits are needed to satisfy the requirements for a Minor. Two courses in Spanish language at or above the intermediate level (6 credits), LAS 3950 (3 credits), and any four additional courses (12 credits) from the course list below will suffice.

COURSES

- Chile* Summer courses in Chile: 001. Latin American Voices; 002. Globalization, Culture, and Society in Chile; 003. Modern Political History of the Southern Cone; 004. Chilean Economic Development; 005. Intensive Spanish; 006. Internship
- Costa Rica** Semester courses in Costa Rica: 001. Human Development and Poverty in Central America; 002. Justice, Gender, and Challenges in Development; 003. Justice and Human Rights in Latin America; 004. Politics and Democracy and Development in Latin America; 005. Environmental Issues and Sustainable Development in Central

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America; 006. Urban and Rural Development: Impact on Central America's Environment; 007. Intensive Spanish
ECO 3127Economics of Underdevelopment
ECO 4200Topics: 001. The Economics of Latin America and the Caribbean;
Topics: 002. Economic Development of Central America
ENG 2041Travel writings: Latin America
HIS 4405The Americas and Spanish Conquest
HIS 4410Colonial Latin America
HIS 4415Revolutionary Latin America
HIS 4420Contemporary Latin America
HIS 4470Third World Revolutions
HIS 4490Topics in World History: 001. Racism and Justice in the Americas
HIS 4495Topics in Latin American History
HIS 4499History of the Caribbean
HON 4000Latin American Themes
LAS 3412Special Topics: 001. Religion in Latin America;
Special Topics: 002.Immigration, Ethnicity, and Development
LAS 3950Inter-disciplinary Latin American Seminar
LAS 5000Internship*; **
LAS 6000Independent Study Research
PHI 2160The Ethics of war
PSC 4750Latin American Politics
PSC 5800Politics of International Economics
SOC 3600Race and Ethnic Relations
SOC 3750Human Populations
SOC 4000Sociological Themes: 001. Immigration, Ethnicity, and Development:
002. Sustainable Development in Latin America
SOC 6500Modernization and Development Seminar:
Latin America in Comparative Perspective
SPA 1121Intermediate Spanish I
SPA 1122Intermediate Spanish II
SPA 1131Conversation and Composition
SPA 1132Advanced Conversation and Composition
SPA 1133Business Spanish I
SPA 1134Business Spanish II
SPA 1138Advanced Spanish Grammar
SPA 2143Latin American Culture
SPA 2212Survey of Latin American Literature
SPA 2213Latin American Theater
SPA 2214Latin American Novel
SPA 2215Latin American Short Story
SPA 3412001. Poesia, Historia y con Política;
002. Latin America Today;
003. Women's Voices in Latin America;
004. Neruda
SPA 3822Latin American Poetry
THL 3740Liberation Theologies

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THL 4300 Ethical Issues in Peace and Justice

THL 4600 Global Poverty

THL 5990 Religion in Latin America

* Offered through Villanova Summer Program in Valparaiso, Chile.

** Offered through VU's partner (CIDH: International Center for Sustainable Human Development) in Costa Rica.

See the Web site address above for more information.

MATHEMATICAL SCIENCES

Chair: Dr. Douglas Norton

Office: 305 St. Augustine Center

Tel. (610) 519-4850

Website: www.villanova.edu/artsci/mathematics/

Course descriptions: www.artsci.villanova.edu/courses/math

FRESHMAN CALCULUS: Prospective first year Villanova students who have completed a year's study of calculus in high school should take the College Board Advanced Placement test for possible credit for the first course at Villanova.

MAJOR: MAT 1500, 1505, 2500, 2600, 2705, 3300, 3400, 3500, and 5900; an approved analysis elective course, e.g. MAT 3305, 4270, or 5400, plus four additional mathematics courses numbered 3000 or higher; a two-semester natural science sequence with laboratory, e.g. PHY 2410/2411 and 2412/2413; a third science course, either 3 credit plus an appropriate lab or 4 credit, such as CSC 1051 (all science courses must be at the science-major level).

MINOR: MAT 1500, 1505, 2500, 2600, plus four courses chosen from MAT 2705, and courses numbered 3000 or higher. Students may petition to substitute an approved upper division course (e.g., CSC 4170, ECE 3720, PHY 4202, CEE 3704) in his/her major for one of these four courses. To graduate with a minor, students must have at least a 2.0 Q.P.A. in their Mathematics courses.

NOTE: The University offers multiple versions of calculus and of statistics. One cannot receive credit for two similar versions of calculus or statistics without prior approval. Please contact the department for more information.

See the website address above for more information.

MILITARY SCIENCE PROGRAM AND MINOR (ARMY ROTC)

Chair: LTC Jon Peterson, U.S. Army
Office: Military Science Program
Website: www.armyrotc.villanova.edu
Course descriptions: www.widener.edu/rotc

ARMY ROTC PROGRAM: By agreement with Widener University's Department of Military Science, Villanova offers a program of study leading to a commission as a Second Lieutenant in the United States Army. Details are found in the Academic Programs Section of the Undergraduate Catalog.

COURSES OF STUDY:

MS 101 Leadership and Personal Development 1 credit
MS 102 Introduction to Tactical Leadership 1 credit
MS 201 Innovative Team Leadership 2 credits
MS 202 Foundations of Tactical Leadership 2 credits
MS 301 Adaptive Tactical Leadership 3 credits
MS 302 Leadership in Changing Environments 3 credits
MS 401 Developing Adaptive Leaders 3 credits
MS 402 Leadership in a Complex World 3 credits
MS 499 American Military History 3 credits

MINOR: Students who successfully complete all military science courses 101 through 402 (18 credit hours) will earn a minor in military science.

See the Web site address above for more information.

MODERN LANGUAGES AND LITERATURES

Chair: Dr. Mercedes Juliá
Office: 303 St. Augustine Center
Tel. (610) 519-4680
Website: www.classicalmodernlanglit.villanova.edu/

MAJORS: Majors in **French and Francophone Studies, Italian, or Spanish** are required to take ten courses above the intermediate level. Once a sequence of language courses has begun, a student may not revert to a lower level course. This does not apply to upper level courses (above 1132). Majors in French and Italian, are required to take the

research seminar, ML 2100. FRE 1133 is required of all majors in French and Francophone Studies. For majors in Spanish SPA 1138 or SPA 2400, SPA 2100 or SPA 2212 and SPA 3950 are required.

MINORS: Students may minor in **Arabic, Chinese, French and Francophone Studies, German, Italian, Japanese, Russian, or Spanish**. Minors in Arabic, Chinese, Japanese, and Russian must complete six courses in the language in sequence. For minors in French and Francophone Studies, German, Italian and Spanish four courses above the intermediate level in the language are required.

The Department also offers literature courses in English translation. Such courses may be used to fulfill a Humanities elective; however, they may not be used toward credit requirements for a language major or minor. An upper level literature course in any language taught in the Department satisfies the advanced literature core requirement. At the same time, it may also count for the minor in a language. However, it may not count for both the advanced literature requirement and the major in a language, except in the case of double majors.

Students may obtain six credits through Villanova summer programs abroad in France, Germany, Italy, Chile, and Spain.

See the Web site address above for more information.

NAVAL SCIENCE PROGRAM AND MINOR (NAVY ROTC)

Chair: Col. Bryan Manthe, USMC

Office: 103 John Barry

Tel. (610) 519-7380

Website: www.nrotc.villanova.edu

Course descriptions: www.nrotc.villanova.edu/current_students/courses

Eligibility for a commission in the U.S. Navy or the U.S. Marine Corps through the NROTC Program is contingent upon successful completion of required University and naval professional courses of study. Courses required by the NROTC program are as follows:

1. Navy Option: NS 0100, 1000, 1100, 2100, 2200, 3100, 3200, 4100, 4200 plus six credits each of Calculus (completed by end of Sophomore year), Physics (completed by the end of Junior year), and English (no time requirement); and, three credits each of Cultural Awareness and American Military Affairs (also no time requirement). All courses must be approved by the Naval Science Advisor.

2. Marine Option: NS 0100, 1000, 1100, 3500, 3600, 4100, 4200 and three credits of American Military Affairs, approved by the Marine Option Advisor.

3. Nurse Option: NS 0100, 1000, 1100, 4100, 4200, and six credits of English, approved by Naval Science Advisor.

MINOR:

(Navy Option) NS 0100, 1000, 1100, 2100, 2200, 3100, 3200, 4100, 4200.

(Marine Option) NS 0100, 1000, 1100, 3500, 3600, 4100, 4200.

See the Web site address above for more information.

PEACE AND JUSTICE CONCENTRATION

Director: Dr. William Werpewowski

Office: Ground Floor, Sullivan

Tel. (610) 519-4499

Website: www.villanova.edu/artsci/peaceandjustice/

Course descriptions: www.artsci.villanova.edu/courses/pj

CONCENTRATION: Twenty-four, including all requirements for the minor, plus two additional Peace and Justice courses, courses cross-listed by Peace and Justice, or courses otherwise earning Peace and Justice credit. Note: No more than three foundational courses may receive credit for the concentration.

MINOR: Eighteen credit hours, including one of the following foundational courses: PJ 2250 Violence and Justice in the World, PJ 2600 Catholic Social Teaching, PJ 2700 Peacemakers and Peacemaking, PJ 2800 Race, Class and Gender, PJ 2900 Ethical Issues in Peace and Justice; and five other courses in Peace and Justice, courses cross-listed by Peace and Justice, or courses otherwise earning Peace and Justice credit. *Note: No more than three foundational courses may receive credit for the minor.*

See the Web site above for more information.

PHILOSOPHY

Chair: Dr. John Carvalho

Office: 108 St. Augustine Center

Tel. (610) 519-4690

Website: www.philosophy.villanova.edu

Course descriptions: www.artsci.villanova.edu/courses/philosophy

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PHI 1050 and one upper-division elective), students can complete the requirements for a Philosophy Major by taking nine additional Philosophy courses. These must include the following.

(1) Three courses in the History of Philosophy sequence:

- PHI 3020 History of Ancient Philosophy
- PHI 3030 History of Medieval Philosophy
- PHI 3040 History of Early Modern Philosophy

With the approval of the Chair of the Department, upper division electives in Ancient, Medieval and Modern Philosophy as well as Topics courses offered in Philosophy and Honors may substitute for the courses in this sequence. Examples of such courses are:

- PHI 4100 Plato and Aristotle
- PHI 3100 Augustine and Antiquity
- PHI 3120 Augustine and Modernity
- PHI 3160 History of Islamic Philosophy
- PHI 3410 Introduction to St. Thomas Aquinas

(2) Two capstone courses in one of the following combinations

(A) One Course numbered PHI 5000: Advanced Seminar in Philosophy and
One course numbered PHI 6000: Research Seminar

(B) Two courses numbered PHI 5000: Advanced Seminar in Philosophy

(3) Four additional upper-division electives

·Students choosing to complete the capstone requirement with option (A) follow the THESIS PATH to the major.

On this path, the four additional upper-division electives are all "free electives." The focus for the student following this path to the major in the thesis, submitted to fulfill the requirements for PHI 6000: Research Seminar. The topic and the research dedicated to completing the thesis are worked out in consultation with a full time member of the Philosophy Department faculty who serves as an advisor on the thesis project and another member of the Department faculty who serves as a second reader. Preparations for the thesis project should begin in the semester before its expected completion (fall semester of the senior year).

·Students choosing to complete the capstone requirement with option (B) follow the TRACK PATH to the major.

On this path, at least three of the four additional upper-division electives must come from the courses assigned to one of the six tracks below. The focus for the student following this path is the track. Courses are assigned to tracks to guide student interests in the study of Philosophy and in the pursuit of a major in Philosophy.

Minor in Philosophy

Students can minor in Philosophy by taking any five courses offered by the Philosophy Department including PHI 1050, required to complete the College Core requirements, but including no more than two courses from the following list: PHI 1050, PHI 2010, PHI 2030, PHI 2115, PHI 2150.

Double Majors

Because of the interdisciplinary nature of Philosophy studies, the Department welcomes and encourages students who want to combine their philosophy major with a major in another discipline. In order to make this possible, Philosophy double majors can (with the permission of the Chair of the Philosophy Department) count up to six cognate or related credits from the second major toward fulfilling the Philosophy Major requirements.

See the Web site address above for more information.

PHYSICS

Chair: Dr. Philip Maurone

Office: 347 Mendel

Tel. (610) 519-4860

Website: www.villanova.edu/artsci/physics/

Course descriptions: www.artsci.villanova.edu/courses/physics

Bachelor of Science, MAJOR:

PHY 2410 University Physics: Mechanics

PHY 2411 Lab: Mechanics

PHY 2412 University Physics: Electricity & Magnetism

PHY 2413 Lab: Electricity & Magnetism

PHY 2414 University Physics: Thermodynamics

PHY 2415 Lab: Thermodynamics

PHY 2416 Modern Physics

PHY 2417 Lab: Modern Physics

PHY 2601 Computational Physics Lab I

PHY 2603 Computational Physics Lab II

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PHY 3310 Electronics
PHY 3311 Electronics Laboratory
PHY 4000 Electricity & Magnetism I
PHY 4001 Electricity & Magnetism I Laboratory
PHY 4002 Electricity & Magnetism II
PHY 4003 Electricity & Magnetism II Laboratory
PHY 4100 Mechanics I
PHY 4102 Mechanics II
PHY 4200 Mathematical Physics I
PHY 4202 Mathematical Physics II
PHY 4301 Experimental Methods I
PHY 5100 Quantum Mechanics
PHY 5200 Thermodynamics/Statistical Mechanics
PHY 5300 Subatomic Physics
CHM 1103 General Chemistry Lab I
CHM 1151 General Chemistry I
CHM 1152 General Chemistry II
MAT 1500 Calculus I
MAT 1505 Calculus II
MAT 2500 Calculus III
MAT 2705 Differential Equations with Linear Algebra.

In addition, Physics majors must select a minimum of one elective from the Physics departmental offerings and two science courses chosen from courses for Science, Mathematics or Computer Science Majors.

See the website address above for more information.

Bachelor of Arts, MAJOR:

PHY 2410 University Physics: Mechanics
PHY 2411 Lab: Mechanics
PHY 2412 University Physics: Electricity & Magnetism
PHY 2413 Lab: Electricity & Magnetism
PHY 2414 University Physics: Thermodynamics
PHY 2415 Lab: Thermodynamics
PHY 2416 Modern Physics
PHY 2417 Lab: Modern Physics
PHY 2601 Computational Physics Lab I
PHY 2603 Computational Physics Lab II
PHY 3310 Electronics
PHY 3311 Electronics Laboratory
PHY 4000 Electricity & Magnetism I
PHY 4001 Electricity & Magnetism I Laboratory
PHY 4100 Mechanics I
PHY 4200 Mathematical Physics I
PHY 4301 Experimental Methods I
PHY 4303 Experimental Methods II

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PHY 5100 Quantum Mechanics
CHM 1103 General Chemistry Lab I
CHM 1151 General Chemistry I
CHM 1152 General Chemistry II
MAT 1500 Calculus I
MAT 1505 Calculus II
MAT 2500 Calculus III
MAT 2705 Differential Equations with Linear Algebra.

In addition, BA majors must complete four courses in a minor, concentration, or technical elective with the Chairperson's approval.

See the website address above for more information.

MINOR: Successful completion of an introductory sequence in Physics, plus a minimum of 15 credits from the upper level Physics courses numbered above 3000. Physics minors are open to all science and engineering students.

Applied Minor: All Math Courses required for a Math degree, plus

MAT 4310 PHY 2416/2417
PHY 2410/2411 PHY 3310/3311
PHY 2412/2413 PHY 4301
PHY 2414/2415 PHY 4303

See the Web site address above for more information.

POLITICAL SCIENCE

Chair: Dr. A. Maria Toyoda
Office: 202 St. Augustine Center
Tel. (610) 519-4710
Website: www.villanova.edu/artsci/psc/
Course descriptions: www.artsci.villanova.edu/courses/psc

MAJOR: Thirty credit hours in political science courses are required for a major including American Government (PSC 1100), International Relations (PSC 1200), research seminar (PSC 1900), and a senior seminar (PSC 6900), restricted to Political Science senior majors.

Elective courses are divided into three areas:

- American Government and Public Law (2000 and 3000 level)
- Comparative Government and International Relations (4000 and 5000 level), and

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- Political Theory and Behavior (6000-6875)

Political Science majors must take one course from each area in order to meet our 1-1-1 distribution requirement. With the exception of internships (up to 6 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. A Junior may apply for the five year BA / MA program.

CERTIFICATES and CONCENTRATIONS WITHIN THE MAJOR: A political science major may choose to earn one or more certificates or concentrations within political science in International Relations, Comparative Politics, Pre-Law, [American Politics](#), Public Administration, Political Theory, and National Security Studies. Students satisfying the requirements for these receive a document testifying to this with their diploma at graduation. The certificate or concentration does not appear on the student's transcript.

Please see <http://www.villanova.edu/artsci/psc/> for details about the five year BA / MA program, certificates, and other PSC programs.

MINOR: Fifteen credits consisting of American Government (PSC 1100), International Relations (PSC 1200), plus any three advanced PSC courses numbered 2000 and above will earn a student a minor in Political Sciences. With the exception of a 3 credit internship, courses taken on a satisfactory/unsatisfactory basis cannot be used to satisfy requirements for the minor.

See the Web site address above for more information.

PSYCHOLOGY

Chair: Dr. Thomas C. Toppino

Office: 334 Tolentine Hall

Tel. (610) 519-4722

Website: www.villanova.edu/artsci/psychology/

Course descriptions: www.artsci.villanova.edu/courses/psychology

Acceptance: To choose psychology as a major, a student must have completed General Psychology, (PSY 1000 or HON 1811) or have AP credit for General Psychology. In addition, a student must have a grade of C+ or higher in General Psychology or have an overall QPA of 3.00 or higher. Because of course prerequisites, students should expect that completion of the major will require at least four semesters after their formal declaration of the major.

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MAJOR: PSY 1000 General Psychology plus 28 additional credits including PSY 4000 Statistics, 4050 Research Methods, 4100 Foundations of Modern Psychology or 4125 Contemporary Issues in Psychology, 4150 Seminar in Professional Development, 4200 Physiological Psychology, 4500 Cognitive Psychology, and 12 elective credits (four electives). PSY 4000 Statistics and 4050 Research Methods are prerequisites for many upper level Psychology courses (PSY 4200 and above). Students who contemplate majoring in psychology may begin the major early by taking PSY 1000 General Psychology, plus any elective courses for which PSY 1000 General Psychology is the only prerequisite.

MINOR: PSY 1000 General Psychology plus any combination of 12 undergraduate credits in psychology.

Courses taken on a satisfactory/unsatisfactory basis cannot be used to satisfy requirements for the major or minor. PSY 1000 General Psychology is a prerequisite for all other courses in psychology.

See the Web site address above for more information.

RUSSIAN AREA STUDIES CONCENTRATION

Director: Dr. Lynne Harnett
Office: 427 St. Augustine Center
Tel. 610/519-4684
Web site: www.artsci.villanova.edu/russian/

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 an exciting, important, and complex part of the world.

CONCENTRATION: Two semesters of Russian at the intermediate level, or demonstrated proficiency at an equivalent level, plus fifteen credit hours selected from among the following: HIS 3240; HIS 3241, 3242; PSC 4401, 5351; RUS 1131, 1132, 3412, 3717, 3718, 3810, 3818, 3819; SAR 4007; THL 5510; and appropriate special topics courses in Economics as approved by the director. In addition, students are required to take RAS 6000, a multi-disciplinary intensive investigation of a topic in Russian studies, generally taken in the senior year.

Students are encouraged to study in Russia for a summer or semester, either at Nizhny Novgorod State University in central Russia or at Higher School of Economics in Moscow (both have an exchange agreement with Villanova), or at another approved

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Russian university. Contact the Russian Area Studies Office or the International Studies Office for further details on available programs and transfer of credits.

See the Web site address above for more information.

RUSSIAN MINOR

Director: Dr. Maghan Keita

Coordinator of Russian Program: Dr. Boris Briker

Office: 332 St. Augustine Center

Web site: <http://www.villanova.edu/artsci/global/>

Course Descriptions:

<http://www.villanova.edu/artsci/global/criticallangs/russian/courses.htm>

MINOR: The minor in Russian Language and Cultural Studies requires four courses in Russian language through the intermediate level: RUS 1111-Introduction to Russian I, RUS 1112-Introduction to Russian II, RUS 1123- Intermediate Russian, RUS 1124- Intermediate Russian II. In addition, the minor requires two courses above the Intermediate level, such as: RUS 1131 Conversation & Composition, RUS 1132 Advanced Conversation & Composition, RUS 5900 Russian: Independent Study.

Courses taught in English do not satisfy the requirements for a Minor in Russian unless special permission is given by the Director of IGIS.

Courses taught in English include:

RUS 3412 Special Topics: Russian Film

RUS 3412 Special Topics: Russian Culture in Context (Study Abroad Course)

RUS 4120 The Russian Short Story

RUS 4130 The Russian Novel

RUS 4140 The Russian Novel II

See the Web site address above for more information.

SOCIOLOGY

Chair: Dr. Thomas Arvanites
Office: 204 St. Augustine Center
Tel. (610) 519-4740
Web site: www.villanova.edu/artsci/sociology/
Course descriptions: www.artsci.villanova.edu/courses/sociology

Acceptance: To select Sociology as a major a student must have earned a “C” or better in SOC 1000, Introduction to Sociology. Because of the major requirements, students must allow three full semesters after the declaration of the major to complete all requirements.

- **Required Courses:**

SOC 1000 Introduction to Sociology
SOC 6500 Senior Seminar

- **One of the following:**

SOC 5000 Nature and History of Sociological Theory
SOC 5050 Sociological Theory and Research
SOC 5100 Contemporary Theory and Research

- **One of the following:**

SOC 5300 Data Analysis for Social Scientists
SOC 5400 Applied Research Methods in Sociology
CRJ 5200 Criminal Justice Research and Statistics

- **Six Sociology or Criminal Justice electives** (not including CRJ 1000 or CRJ 5000)

MINOR: SOC 1000 and four other courses chosen from the offerings of the department. The student must inform the chair of his or her intention to minor and request certification of the minor when it has been completed.

A student may take an internship in a field setting in the second semester of the junior year or during the senior year. Students should consult with the Chair and Director of the Internship Program.

See the Web site address above for more information.

SPANISH

Chair: Dr. Mercedes Juliá

Program Coordinator: Dr. Carmen Peraita

Office: 303 St. Augustine Center

Tel. (610) 519-7831

Web site: www.classicalmodernlanglit.villanova.edu/spanish

Course descriptions: www.artsci.villanova.edu/courses/spanish

MAJOR: Majors in Spanish are required to take ten courses above the intermediate level (1122). Once a sequence of language courses has begun, a student may not revert to a lower level course. This does not apply to upper level courses (beyond 1132). SPA 1138 or SPA 2400, SPA 2211 or SPA 2212 and SPA 3950 are required of all majors.

MINOR: For a minor in Spanish four courses above the intermediate level in the language, including SPA 1131 and 1132 are required.

The Department of Modern Languages and Literatures also offers literature courses in English translation. Such courses may be used to fulfill a Humanities elective; however, they may not be used toward credit requirements for a language major or minor. An upper level literature course in any language taught in the Department satisfies the advanced literature core requirement. At the same time, it may also count for the minor in a language. However, it may not count for both the advanced literature requirement and the major in Hispanic Studies, except for double majors.

Students may obtain up to six credits through the Villanova summer programs in Valparaíso (Chile) and Cádiz (Spain).

See the Web site address above for more information.

STUDIO ART AND MUSIC PROGRAM

Office: 205 St. Augustine Center

Tel. (610) 519-4760

Course descriptions: www.artsci.villanova.edu/courses/sar

Courses in Studio Art and Music are administered by the chair of the Theatre Department.

See the Web site address above for more information.

THEATRE MINOR

Chair: Rev. Richard Cannuli, O.S.A.

Office: 205 St. Augustine Center

Tel. (610) 519-4760

Web site: www.villanova.edu/artsci/sociology/

Course descriptions: www.artsci.villanova.edu/courses/theatre

MINOR: Students may fulfill a Theatre Minor by completing five theatre courses (three required/two elective) and a theatre practicum. Interested students should request further information through the Theatre Department Office in St. Augustine Center for the Liberal Arts, Rm. 205.

Any student may educate himself/herself in the art and craft of theatre through Electives and through participation in the department's Theatrical Productions. Auditions and backstage positions are open to all undergraduates for the entire academic theatre season.

See the Web site address above for more information.

THEOLOGY AND RELIGIOUS STUDIES

Chair: Dr. Bernard Prusak,

Office: 107 St. Augustine Center

Tel. 610/519-4730

Web site: www.villanova.edu/artsci/theology/

Course descriptions: www.artsci.villanova.edu/courses/theology

MAJOR: Thirty-three credit hours including the required introductory course, THL 1050 or 1051, which students in all colleges normally take in the first year of studies.

Eighteen credit hours are to be taken from among the following:

- One Course in Biblical Studies: any course numbered from THL 2000 to THL 2480.
- One Course in Historical Studies: any course numbered from THL 2500 to THL 2900.
- Theological Studies: THL 3200: Understanding Jesus the Christ.
- One Course in Studies in Christian Living: any course numbered from
 - o THL 4100 to THL 4690.
- One Course in Religious and Cultural Studies: any course numbered from THL 5100 to THL 5285.
- Advanced Seminar, THL 6500

Twelve credit hours are to be taken from other departmental offerings in consultation with the student's Academic Advisor.

MINOR: Eighteen credit hours inclusive of the required introductory course (THL 1050 or 1051). All courses required for the major are highly recommended for minors.

THL 1050 or 1051 is a prerequisite for all other courses in Theology and Religious Studies.

See the Web site address above for more information.

WRITING AND RHETORIC CONCENTRATION

Director: Dr. Karyn Hollis
Office: 458 St. Augustine Center
Tel. (610) 519-7872
Website: www.villanova.edu/artsci/writingrhetoric/

ACCEPTANCE: Students must have a 3.0 average or better to enroll in the concentration. An entrance essay must be submitted and will be scored in terms of purpose, content, style and organization. A base score must be attained.

The Concentration in Writing and Rhetoric provides students with a programmatic option for developing excellence in writing and speaking skills. The Concentration is open to students from all colleges in all majors.

CONCENTRATION: By the end of the first semester in the Concentration, students will have studied for and passed a self-administered WebCT exam covering principles of Standard Edited English, a style sheet, and other rules of grammar, punctuation and mechanics.

By the end of the student's senior year, a "capstone" portfolio will be submitted to the director representing the range and quality of the student's writing. This portfolio will be in the format of a "clip book" suitable for presentation to potential employers and will contain any published materials the student has written while in the Concentration. A similar E-Portfolio of student work displayed on the Internet is also required.

To successfully complete the Concentration, students must achieve a 3.0 average in their Concentration courses. Students must complete 24 credit hours. All courses are to be writing enriched or writing intensive, including:

- Three courses in Writing Practice at the intermediate or advanced level from the list of approved courses
- Two courses in theory of composition, history of language, rhetorical theory or history and critical theory
- Two writing enriched or writing intensive upper-level English courses

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- One practicum course

MINOR: 18 credit hours in advanced courses, numbered 2000 or above. All courses are to be writing enriched or writing intensive, including:

- Three courses in writing practice from the approved list
- Two courses in theory of composition, rhetorical theory or critical theory
- One writing enriched or writing intensive English literature course at the 2100 level or above.

See the Web site address above for more information.

VILLANOVA SCHOOL OF BUSINESS

James M. Danko, Dean

Ronald P. Hill, Senior Associate Dean for Intellectual Strategy

Melinda B. German, Associate Dean for Undergraduate Business Programs

Debra A. Arvanites, Associate Dean for Accreditation & Assessment

Madonna H. Marion-Landais, Associate Dean for External Relations

Robert F. Bonner, Associate Dean for Graduate Business & Executive Programs

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 Father Joseph C. Bartley. 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 name was changed to the Villanova School of Business (VSB). Today it offers the following undergraduate degrees: Bachelor of Science in Accountancy and Bachelor of Business Administration with majors in Economics, Finance, Management, Management Information Systems, and Marketing. In addition, an International Business co-major is also available and must be taken in conjunction with another business major. Graduate programs include the Executive MBA, MBA - Flex Track, MBA – Fast Track, Master of Taxation jointly with the Villanova Law School, Master of Accountancy, Master of Science in Finance, Master of Science in Church Management, and a JD/MBA program offered jointly with the Villanova Law School.

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 of 96 full-time professors, with over ninety percent holding the terminal degree in their area of expertise. Approximately 40 adjunct professors drawn from industry are also part of the faculty contingent. The faculty is widely recognized for its excellence in teaching, research, and professional service.

MISSION

The Villanova School of Business seeks to be a leader among business schools in fostering a learning environment that enables members of our community to develop the knowledge, experience, values, and capabilities needed for a lifetime of learning consistent with the moral vision of St. Augustine. Strengthened by our liberal arts foundation, we also strive to collaborate with the business and academic communities to create, share, and apply knowledge.

We value and support:

- the rich tradition of Catholic Social Teaching and the guidance it provides for all College activities
- an environment of mutual respect, professional development, and continuous improvement
- a quest to achieve educational distinctiveness in the markets in which we choose to compete
- active partnership with other units of the University
- the mutually supportive activities of teaching, research, and service
- innovation and experimentation by faculty and staff in achieving continuous improvement in the educational delivery process
- all dimensions of scholarship, including teaching, discovery, integration, and application
- stakeholder-based perspectives in decision-making
- life-long relationships with our graduates
- the creation of a learning environment the end product of which is adaptive problem solvers
- diversity of opinion and thought, as they relate to the development of operational strategies and tactics chosen to accomplish our mission

OBJECTIVES

We seek to develop students who are responsive to new and changing environments, effective in crafting creative solutions to complex problems; in essence, adaptive problem solvers. The four strategic pillars form the curriculum framework for the development of *The Learning Environment* within VSB.

- **Technological Competence.**
- **Ethics and Social Responsibility.**

- **Innovation**
- **Global Mindset**

THE CLAY CENTER AT VSB

The Clay Center at VSB, named in honor of VSB alumnus, faculty member, and Dean Emeritus Alvin A. Clay, is dedicated to undergraduate student academic advising and professional development services, and serves as a “one-stop-shop” resource where all academic support and informational resources are available in one place to help undergraduate business students to reach their goals. The Clay Center provides;

- educational planning and academic advising,
- experiential learning opportunities (internships and CoOps), and
- professional development programs and resources

These resources help undergraduate 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 connects each incoming freshman with a VSB Peer Counselor and a Clay Center Advisor. VSB Peer Counselors and Clay Center Advisors provide guidance on course selection, registration, curricular planning, major selection, and the general adjustment from high school to college. During the sophomore year, upon selection of their majors, students are assigned a VSB Faculty Advisor in their area of study as an additional source of help and information. VSB Faculty Advisors are available to provide guidance on defining and reaching educational goals in a given field of study as well as to answer questions pertaining to curricular planning, study abroad opportunities, and other academic options.

DEGREE PROGRAMS

UNDERGRADUATE DEGREES OFFERED

The Villanova School of Business offers the following undergraduate degrees: Bachelor of Science in Accountancy and Bachelor of Business Administration with majors in Economics, Finance, Management, Management Information Systems, and Marketing. In addition, an International Business co-major is also available and must be taken in conjunction with another business major.

BACCALAUREATE DEGREE REQUIREMENTS

The requirements for the Bachelor of Science or Bachelor of Business Administration in VSB 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 and 50% of major course credit hours required for a degree in VSB must be completed at Villanova University.
- ❑ The final 30 hours of one'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.

BASIC CURRICULUM

The curriculum outlined below provides a suggested sequence to complete the baccalaureate degree requirements. It incorporates some modifications based on particular majors. However, this suggested sequence should not be viewed as limiting since individual adjustments are made to meet desired educational objectives.

FRESHMAN YEAR		Credits
ACS 1000	Traditions in Conversation	3
ACS 1001	Modernity & Its Discontents	3
ECO 1001, 1002	Intro to Microeconomics/Macroeconomics * ¹	6
ENG 1050	The Literary Experience * ²	3
MAT 1500, 1505	Calculus I & II	8
PHI 1050	Introduction to Philosophy	3
VSB 1000	Information Technology	1
VSB 1001	Business Dynamics I	3
VSB 1002	Business Dynamics II	3

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SOPHOMORE YEAR		Credits
Behavioral Science	* ³	3
ETH 2050	Ethical Traditions & Contemporary Life * ² & ⁴	3
THL 1050 OR 1051	Christian Theology OR Christianity in History	3
VSU 2005	Business Statistics	3
VSU 2006	Strategic Information Technology	3
VSU 2007 OR HIS XXXX	Corporate Responsibility & Regulation * ⁵ OR History Elective * ⁴ & * ⁵	3
VSU 2010	Financial Management & Reporting	6
VSU 2020	Competitive Effectiveness	6

JUNIOR YEAR		Credits
Humanities	* ⁶	3
ECO 3108	Global Political Economy * ¹	3
HIS XXXX OR VSU 2007	History Elective * ⁴ & * ⁵ OR Corporate Responsibility & Regulation * ⁵	3
Major Electives		9
Natural Science	* ⁷	3
Social or Natural Science	* ⁸	3
VSU 3010	Business Processes	6

SENIOR YEAR		Credits
Major Electives		9
THL XXXX	* ⁹	3
VSU 4002	Strategic Thinking & Implementation	3
Free Electives	* ¹⁰	15

1. **ECO 1001, ECO 1002, and ECO 3108:** are not included in the technical GPA calculation.
2. **ENG 1050, ETH 2050,** and all **VSU** courses must be taken at Villanova.
3. **Behavioral Science:** choose from PSY 1000 or any SOC.
4. **Economics Major:** take ECO 2101 & ECO 2102 in the sophomore year and defer ETH 2050 and VSU 2007 (**or** HIS XXXX) to the junior year.
5. **VSU 2007 or HIS XXXX:** Accounting majors and Business Law & Corporate Governance minors are encouraged to take VSU 2007 in the sophomore year, and take HIS XXXX in the junior year.
6. **Humanities:** choose from Art & Art History, Classical Study, English, Humanities, Languages*, Philosophy, Studio Art & Music, or Theater. *If a student completed 2 years of a language in high school, credit for introductory courses in that language taken at the college level will not satisfy degree requirements, including electives.
7. **Natural Science:** choose from Astronomy & Astrophysics, Biology, Chemistry, Meteorology, Physics, GEV 1050, or GEV 1051. (A science lab is not required.)
8. **Social Science or Natural Science:** choose from Criminal Justice, Geography and the Environment, History, Political Science, Psychology, Sociology, or the Natural Sciences (as listed above).
9. **THL XXXX:** choose any Theology elective with a course number of 2000 or above.

10. **BL 2185** is recommended for ACC majors who want to sit for CPA certification.

SPECIAL PROGRAMS

BUSINESS MINORS

(1) MINORS FOR NON-BUSINESS MAJORS:

A. General Business Minor (Traditional Track; spread over several semesters)

Students enrolled in other colleges of the University may apply to seek a General Business Minor through the Villanova School of Business (VSB).

Business Minor applications are reviewed once per year after spring grades are posted. Acceptance is determined on a competitive basis. Applications are available through the Clay Center at VSB (Bartley Hall 1054) and online at <http://www.villanova.edu/business/undergrad/forms.htm>. All students are also required to attend one of the mandatory information sessions held by VSB before applying. Information sessions are held several times each semester. Dates and times are posted at the start of the fall and spring semesters. The deadline for submitting an application is May 1st. Notification of acceptance is sent to students in late May. Any questions should be directed to the Clay Center at (610) 519-5532 or businessminor@villanova.edu.

All business courses must be taken at Villanova. Microeconomics, Macroeconomics, and the Statistics requirement may be taken elsewhere. Preapproval by the Clay Center at VSB is necessary.

The required business courses for a General Business Minor for students in the Class of 2013 are:

ECO 1001	Intro to Microeconomics
ECO 1002	Intro to Macroeconomics
VSB 1000	Information Technology (1 cr.)
VSB 1001	Business Dynamics I
VSB 1002	Business Dynamics II
VSB 2010	Financial Management & Reporting ¹ (6 cr.)
VSB 2020	Competitive Effectiveness ¹ (6 cr.)
	Statistics Requirement ²

1. Prerequisites: VSB 1000, VSB 1001, VSB 1002, ECO 1001, and ECO 1002. MAT 1235 (or VSB 2005) is a co-requisite for VSB 2010.
2. Statistics may be fulfilled by successfully completing:
 - BIO 3105 - Biostatistics and Experimental Design **OR**

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- MAT 1230 and MAT 1235 - Intro Statistics I and II **OR**
- ECO 2137 - Economics Statistics **OR**
- MAT 2310 - Statistics for Experimenters **OR**
- MAT 4310 - Statistics Methods **OR**
- VSB 2005 - Business Statistics (if a student has successfully completed a calculus course)

Please Note: Statistics is waived for Engineers and Math Majors.

Students who complete the General Business Minor may then minor in Accounting, **Business Law and Corporate Governance**, Economics, Entrepreneurship, Finance, International Business, Management Information Systems, Marketing, or Real Estate. **Additional coursework may be required.** See course requirements listed under *Academic Areas* for more detailed information.

B. Villanova Summer Business Institute (One full summer – 10 weeks)

The Villanova Summer Business Institute (SBI) provides an opportunity for non-business majors to earn a Minor in Business from VSB. The ten-week program (typically scheduled from end of May – end of July) is taught by full-time VSB faculty members. SBI covers key business disciplines including economics, accounting, finance, ethics, management, marketing, and business law, and provides professional development programs. 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.

Courses include:

- SBI 1000 Professional Success (1 credit)
- SBI 1001 Business Fundamentals (1 credit)
- SBI 2005 Applied Economics (3 credits)
- SBI 2006 Corporate Responsibility (3 credits)
- SBI 3005 Financial Management and Reporting (4 credits)
- SBI 3006 Competitive Effectiveness (4 credits)

Applicants may be current students or alumni from any non-VSB major at Villanova University or from other colleges/universities. Applicants must have completed their freshman year, usually 30 credits, and be in good academic standing.

SBI applications will be accepted until April 15, or until the program is full. Decisions are made on a rolling basis beginning January 15, so early submission of applications is encouraged. Complete information can be found online at <http://www.villanova.edu/business/sbi/>. Questions should be directed to the Clay Center at (610) 519-5951 or via email sbi@villanova.edu.

For Villanova students, SBI credit may apply to the degree requirements in their primary academic college. Students should check 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 general business minor and may also pursue an additional VSB minor in one of the following business disciplines: Accountancy, **Business Law and Corporate Governance**, Economics, Entrepreneurship, Finance, International Business, Management Information Systems, Marketing, or Real Estate; see course requirements listed under *Academic Areas* for more detailed information. **Additional coursework may be required.**

(2) MINORS FOR BUSINESS MAJORS:

VSB students may pursue a minor in various business disciplines. See course requirements listed under *Academic Areas* for more detailed information.

CO-MAJOR INTERNATIONAL BUSINESS

The Co-Major must be taken in conjunction with a major in Accounting, Economics, Finance, Management Information Systems, Management, or Marketing.

The International Business Co-Major course requirements are as follows:

- MGT 2350 International Comparative Management
- Three (3) **International Business** elective courses (**must be from at least two different disciplines**):
 - ACC 2420 International Accounting
 - BL 2160 International Business Law
 - ECO 3115 Alternative Economic Systems
 - ECO 3127 Economics of Underdeveloped Areas
 - ECO 4204 Economics of Latin America & Caribbean
 - FIN 2335 International Financial Management
 - MGT 2208 Special Topic in International Management
 - MGT 2250 Global Corporate Social Responsibility
 - MGT 2352 Business in Emerging Markets
 - MKT 2280 International Marketing and Trade
 - 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. 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.

- One (1) international-related History or international related Social Science selected from Geography and the Environment, History, Psychology, Political Science, or Sociology.
- Language Requirement:

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- Successful completion of placement beyond the intermediate levels on language placement exam administered by Villanova University, **OR**
 - Two semesters of a foreign language (minimum 6 credits) at or above intermediate level if French, German, Italian, or Spanish is chosen, **OR**
 - Two semesters at the introduction level if Arabic, Chinese, Japanese, Russia is chosen. If a student took two years or more of Arabic, Chinese, Japanese, or Russia in high school, then the student must complete the intermediate II of the language to satisfy the language requirement for IB Co-Major.
- ☐ Approved international study experience.

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 International Studies Office (Middleton Hall, 2nd floor, 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 by the Clay Center at VSB.

INTERNSHIPS AND COOPS

VSB encourages all students to participate in an internship during their academic career. Internships, whether taken for academic credit or not for credit, provide valuable insight into career interests and objectives, provide concrete opportunities for students to make connections between classroom and theory, and often lead to permanent employment. Academic internships (“for credit” internships) are graded on a satisfactory/unsatisfactory basis and fulfill a free elective requirement (not a major elective requirement). Full-time CoOp opportunities are also available to all VSB students. A maximum of six (6) credits of internship or CoOp can be counted toward VSB degree requirements. Credit approval and course registration for an internship or a CoOp must be completed BEFORE the internship/CoOp commences.

Prerequisites for an Academic Internship/CoOp:

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- Enrolled as a full time undergraduate VSB student or Business Minor
- Sophomore standing (minimum 30 credits)
- Minimum GPA of 2.5 for fall or spring internships; minimum GPA of 3.0 for CoOps (some employers may require a higher GPA)

Registration Deadlines

Internship Participation	Course Registration Deadline
Fall Semester	Prior to start of internship OR end of fall semester drop/add period, whichever comes first
Spring Semester	Prior to start of internship OR end of spring semester drop/add period, whichever comes first
Summer	Prior to start of internship OR June 15, whichever comes first

Students should contact the Clay Center at VSB, Bartley Hall 1054, 610-519-5532 for complete information and procedures.

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.

LAPTOP COMPUTERS

Computing technology is integrated throughout the undergraduate program of the Villanova School of Business. The University supports VSB's learning environment by assigning state-of-the-art laptop computers to students. This computer is fully configured, and contains the hardware features and software necessary to support VSB's academic programs and to access all of the University's information resources. The University operates a computer support center, TechZONE, (Vasey Hall, Room 101, Phone: 610-519-7777) that offers hardware and software assistance, and also provides a loaner pool of laptops for business students whose machines require service. At the conclusion of the Sophomore year, students return the assigned computer in good working order to the University, and then receive a new laptop for use during their junior and senior years. Students return this second computer in good working order to the

University at the conclusion of their senior year. If a student leaves VSB for any reason, the student must immediately return the computer to the TechZONE in good working order. Further information on VSB's laptop computer program can be obtained by contacting the TechZONE at (610) 519-6646 or <http://www.villanova.edu/unit/support/...>

ORGANIZATIONS

The objectives of collegiate education include proper social development and social leadership. Accordingly, Villanova University offers to the students a variety of extracurricular and co-curricular activities - religious, athletic, social, and cultural. Student activities are under the jurisdiction of the Dean of Students, the Dean's staff, and the Faculty Moderator of the individual organization. VSB sponsors the following organizations: Accounting Society, Advertising Society, Beta Gamma Sigma – Business Honor Society, Beta Alpha PSI, Business Honors Association, Business Without Borders, Economics Society, Entrepreneurship Society, Equity Society, Financial Management Association, Fixed Income Society, Gamma Phi Honor Society, International Business Society, Management Society, Management Information Systems Society, Marketing Society, National Association of Black Accountants, Omicron Delta Epsilon - Economics Honor Society, Phi Beta Lambda, Real Estate Society, Villanova Technical Analysis Group, and Villanova Women in Business Society.

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 of the Villanova School of Business. Such policies are subject to change without prior notice.*

ACADEMIC AREAS

ACCOUNTANCY & INFORMATION SYSTEMS

Chair: Dr. Michael Peters
Office: 3019 Bartley Hall, tel. 610-519-4340
Website: www.villanova.edu/business/facultyareas/accounting

I. ACCOUNTING MAJOR

COURSE REQUIREMENTS FOR ACCOUNTING MAJOR:

- ACC 2310 Intermediate Accounting I
- ACC 2320 Intermediate Accounting II
- ACC 2430 Auditing
- ACC 2460 Federal Income Tax I

Plus two (2) Accounting elective courses

Please Note: The following courses **do not count** toward **Accounting** elective course:

- ACC 3430 Accounting Internship - 3 credits
- ACC 3460 Accounting Internship - 6 credits
- ACC 3470 Accounting CoOp
- ACC 3500 Independent Study

COURSE REQUIREMENTS FOR ACCOUNTING MINOR:

Three (3) **Accounting** elective courses from the following list:

- ACC 2310 Intermediate Accounting I
- ACC 2320 Intermediate Accounting II
- ACC 2340 Accounting Information Systems
- ACC 2420 International Accounting
- ACC 2430 Auditing
- ACC 2450 Advanced Accounting
- ACC 2460 Federal Income Tax I
- ACC 2470 Cost Accounting, Analysis and Control
- ACC 2480 Advanced Taxes
- ACC 3350 Fraud Examination

II. MANAGEMENT INFORMATION SYSTEMS

COURSE REQUIREMENTS FOR MANAGEMENT INFORMATION SYSTEMS MAJOR:

- MIS 2020 Programming for Adaptive Problem Solving
- MIS 2030 Database Management
- MIS 2040 Systems Analysis and Design

Plus any three (3) **MIS** major elective courses from the following:

- ACC 2340 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

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MIS 3090 Special Topics in MIS

**COURSE REQUIREMENTS FOR MANAGEMENT INFORMATION SYSTEMS
MINOR:**

MIS 2020 Programming for Adaptive Problem Solving
MIS 2030 Database Management
MIS 2040 Systems Analysis and Design

ECONOMICS & STATISTICS

Chair: Dr. Wen Mao
Office: 2015 Bartley Hall, tel. 610-519-4370
Website: www.villanova.edu/business/facultyareas/economics

COURSE REQUIREMENTS FOR ECONOMICS MAJOR:

ECO 2101 Macro-Economic Theory
ECO 2102 Micro-Economic Theory
Plus one of the following options:

Option #1: ECO 3132 Research Methods
ECO 4132 Senior Seminar

and two (2) **Economics** elective courses with course number of 3000 or above (except ECO 3108)

Option #2 ECO 3137 Econometrics

and three (3) **Economics** elective courses with course number of 3000 or above (except ECO 3108)

BACHELOR OF ARTS, ECONOMICS MAJOR: Students in the College of Liberal Arts and Sciences who major in Economics earn the degree of Bachelor of Arts in Economics. Such students must take Calculus (MAT 1310, MAT 1320, or MAT 1500) either to satisfy their math requirement or as a free elective. In addition, students must successfully complete: ECO 1001, ECO 1002, ECO 2101, ECO 2102, ECO 2137 (or VSB 2005), ECO 3132, ECO 4132, and 12 elective Economics credits numbered above 3000. Students may receive a Specialization certificate by choosing to specialize in one of the following areas – (Business Economics, Global Economics, Human Resources, or Pre-Law) by taking, as part of their 12 Economic credits, three courses within their specialty and focusing their seminar paper (ECO 4132) on that specialty area.

COURSE REQUIREMENTS FOR ECONOMICS MINOR:

MAT 1310, MAT 1320, or MAT 1500 Calculus

Villanova University

ECO 1001	Intro to Microeconomics
ECO 1002	Intro to Macroeconomics
ECO 2101	Macro Economic Theory
ECO 2102	Micro Economic Theory

Plus one **Economics** elective course above 3000 (except ECO 3108) for VSB students **OR** two (2) **Economics** elective courses above ECO 3000 for non-VSB students.

FINANCE

Chair:	Dr. David Shaffer
Office:	2019 Bartley Hall, tel. 610-519-7395
Website:	www.villanova.edu/business/facultyareas/finance

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 **OR** two (2) **Finance** elective courses plus one of the following:

ACC 2310	Intermediate Accounting I
ECO 2101	Macro-Economic Theory
ECO 2102	Micro-Economic Theory
ECO 3137	Intro to Econometrics

Please Note: The following courses **do not count** toward **Finance** elective courses:

FIN 3350	Finance Internship
FIN 3360	Independent Study – Finance
FIN 3470	Finance CoOp

COURSE REQUIREMENTS FOR FINANCE MINOR:

FIN 2227	Fixed Income Markets and Valuation
FIN 2323	Equity Markets and Valuation

Plus one (1) **Finance** elective course except FIN 3350, FIN 3360, or FIN 3470

COURSE REQUIREMENTS FOR REAL ESTATE MINOR:

BL 2150	Real Estate Principles and Practices
RES 3150	Real Estate Investments
RES 4150	Real Estate Development

MANAGEMENT & OPERATIONS

Chair: Dr. Kevin Clark
Office: 2083 Bartley Hall, tel. 610-519-6924
Website: www.villanova.edu/business/facultyareas/management

COURSE REQUIREMENTS FOR MANAGEMENT MAJOR:

MGT 2155 Organizational Behavior
MGT 2350 International Comparative Management
DIT 2160 Business Decision Making
Plus three (3) Management elective courses.

COURSE REQUIREMENTS FOR INTERNATIONAL BUSINESS CO-MAJOR:

- MGT 2350 International Comparative Management
- Three (3) **International Business** elective courses (**must be from two different disciplines**):

ACC 2420	International Accounting
BL 2160	International Business Law
ECO 3115	Alternative Economic Systems
ECO 3127	Economics of Underdeveloped Areas
ECO 4204	Economics of Latin America & Caribbean
FIN 2335	International Financial Management
MGT 2208	Special Topic in International Management
MGT 2250	Global Corporate Social Responsibility
MGT 2352	Business in Emerging Markets
MKT 2280	International Marketing and Trade

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. 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.

- One (1) international-related History or international related Social Science selected from Geography and the Environment, History, Psychology, Political Science, or Sociology.
- Language Requirement:
 - Successful completion of placement beyond the intermediate levels on language placement exam administered by Villanova University, **OR**
 - Two semesters of a foreign language (minimum 6 credits) at or above intermediate level if French, German, Italian, or Spanish is chosen, **OR**
 - Two semesters at the introduction level if Arabic, Chinese, Japanese, Russia is chosen. If a student took two years or more of Arabic, Chinese,

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Japanese, or Russia in high school, then the student must complete the intermediate II of the language to satisfy the language requirement for IB Co-Major.

- ☐ Approved international study experience.

COURSE REQUIREMENTS FOR ENTREPRENEURSHIP MINOR:

ENT 2020	Entrepreneurial Management *
ENT 2021	Entrepreneurial Marketing **
ENT 2022	Entrepreneurial Finance ***
ENT 2023	Entrepreneurial Practicum ***

Note: * fulfills MGT Elective or a Free Elective

** fulfills MKT Elective or a Free Elective

*** fulfills a Free Elective

COURSE REQUIREMENTS FOR INTERNATIONAL BUSINESS MINOR:

MGT 2350	International Comparative Management
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Two (2) **International Business** elective courses (**must be from two different disciplines**)

ACC 2420	International Accounting
BL 2160	International Business Law
ECO 3115	Alternative Economic Systems
ECO 3127	Economics of Underdeveloped Areas
ECO 4204	Economics of Latin America & Caribbean
FIN 2335	International Financial Management
MGT 2208	Special Topic in International Management
MGT 2250	Global Corporate Social Responsibility
MGT 2352	Business in Emerging Markets
MKT 2280	International Marketing and Trade
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. 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.

One (1) international-related History or international related Social Science selected from Geography and the Environment, History, Psychology, Political Science, or Sociology.

School of Business

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

MARKETING & BUSINESS LAW

Chair: Dr. P. Greg Bonner
Office: 3015 Bartley Hall, tel. 610-519-4350
Website: www.villanova.edu/business/facultyareas/marketing

COURSE REQUIREMENTS FOR MARKETING MAJOR:

MKT 2197 Marketing Research
MKT 2375 Marketing Management
Plus four (4) additional **Marketing** elective courses:

MKT 2120	Buyer Behavior
MKT 2220	Advertising Management
MKT 2224	Professional Selling
MKT 2225	Sales Management
MKT 2230	Marketing of Services
MKT 2235	Sports Marketing
MKT 2280	International Marketing
MKT 2290	Interactive Marketing
MKT 2349	Contemporary Topics in Marketing
MKT 4132	Integrated Marketing Campaigns
ENT 2021	Entrepreneurial Marketing

COURSE REQUIREMENTS FOR MARKETING MINOR:

MKT 2120 Buyer Behavior

OR

MKT 2197 Marketing Research

Plus two additional **Marketing** elective courses (ENT 2021, Entrepreneurial Marketing, also fulfills a Marketing minor elective course.)

Please Note: The following courses do not count toward the **Marketing** minor requirements:

MKT 3450	Marketing Internship
MKT 3470	Marketing CoOp

COURSE REQUIREMENTS FOR BUSINESS LAW & CORPORATE GOVERNANCE MINOR:

BL 2185 The Law of Contracts and Commercial Transactions

BL 2135 The Business Entity: Law, Governance, & Ethics

Plus one of the following courses:

MGT 2212 Leadership

MGT 2250 Global Corporate Social Responsibility

MGT 2208 Topic: Global Business Ethics

BL 2160 International Business Law

Prerequisites (may be taken concurrently with above courses):

VSB 2007 Corporate Responsibility and Regulation

ETH 2050 Ethical Traditions & Contemporary Life

COLLEGE OF ENGINEERING

Gary A. Gabriele, Ph.D., Dean

Gerard F. "Jerry" Jones, Ph.D., Associate Dean, Academic Affairs

Stephen Jones, Ph.D., Associate Dean, Student and Strategic Programs

Alfonso Ortega, Ph.D., Acting Associate Dean, Graduate Studies and Research

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 (after The Catholic University of America, 1896, Manhattan College, 1896, and the University of Notre Dame, 1897). 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, an Interdisciplinary Doctoral Program was instituted. The undergraduate programs of Chemical Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, and Mechanical Engineering (all of the undergraduate engineering programs at Villanova) are accredited by the Accreditation Commission (EAC) of ABET (Accreditation Board for Engineering and Technology), 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 – telephone (410) 347-7700. There are two research units in the College: The Center for Advanced Communications (CAC), and The Center for Nonlinear Dynamics and Control (CENDAC). The college also has extensive research programs in environmental engineering, including waste water treatment and storm water management, as well as a well recognized research program in alternative energy technology..

MISSION STATEMENT

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, a knowledge of contemporary issues, and an appreciation of humanistic concepts in literature, the arts, and philosophy.

The College pursues these objectives by stressing:

- ❑ Excellence in teaching
- ❑ Faculty development through research and professional activities
- ❑ Emphasis on the design process so that the students are exposed to real-world situations
- ❑ Graduating students with the following attributes:
 - Ability to apply scientific and mathematical concepts and principles to identify, formulate, and solve problems in real-world context
 - Ability to plan and conduct experimental investigations, and to analyze and interpret their results
 - Ability to be an effective member of a project team
 - Ability to communicate ideas and information
 - Understanding of the role of the engineering profession and technology, including appreciation of concepts drawn from the humanities and social sciences
 - Development of high professional and ethical standards
 - Motivation and capability to acquire, evaluate, and assimilate knowledge and continue the learning experience

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 of Chemical Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, and Mechanical Engineering (all of the undergraduate engineering programs at Villanova) are accredited by the Accreditation Commission (EAC) of ABET..

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, 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 leads to required projects for all seniors to ensure professional preparation in the fundamentals of the design process within the real constraints of problem solving. In order 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 normally be completed within a six-year period. NOTE: It is the responsibility of each student to know and to fulfill all degree requirements. In order 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 2010 OR LATER**

Freshman Year						
First Semester		Credits		Second Semester		Credits
CHM 1151	General Chemistry	4		CHM 1156	General Chemistry II for Engineers ²	4
CHM 1103	General Chemistry Laboratory I	1		ACS 1001 ¹	Modernity and Its Discontents	3
ACS 1000 ¹	Traditions in Conversation	3		EGR 1205	Interdisciplinary Projects II	3
EGR 1200	Interdisciplinary Projects I	3		MAT 1505	Calculus II	4
MAT 1500	Calculus I	4		PHY 2400	Physics I, Mechanics	3
THL 1050 or THL 1051	Christian Theology, an Introduction or Christianity in History	3				

NOTE ¹: This course may be taken in either semester.

NOTE ²: Students electing to major in Electrical Engineering or Computer Engineering are required to substitute ECE 1620 Engineering Programming & Applications.

ENGINEERING CURRICULUM ELECTIVE REQUIREMENTS IN HUMANITIES AND SOCIAL SCIENCE

In addition to required Freshman Year courses and specified courses for each degree program, candidates for degrees in engineering must successfully complete 12 credits from the following:

- THL 1050 Christian Theology: an Introduction or THL 1051 Christianity in History. This course is normally taken in Freshman Year as part of the Core Curriculum.
- One 3-credit Theology course at the 2000 level or above.
- Two additional 3-credit courses chosen from among the following:
 - o Theology courses at the 2000 level or above
 - o Any Philosophy course
 - o Any Peace and Justice course
 - o ETH 2050 Ethical Traditions and Contemporary Life
 - o EGR 2001 Engineering: The Humanistic Context. (This course is required in some programs. Students should consult adviser.)

College of Engineering

Note: one of these two 3 credit courses must be fulfilled by an Ethics course. Refer to departments' specific lists of Ethics courses for options.

ELECTIVES

All students select their remaining humanities and social science electives from among the courses listed in the University catalog and offered by the following departments.

Humanities	Social Sciences
Arab & Islamic Studies Art History (except skills courses) Classical Studies Communication (except skills courses) English (Literature) History Honors Program (for eligible students only) Humanities Modern Languages (except speaking courses in native language) Philosophy Theatre (except skills courses) Theology (2000 and above)	Economics Geography and the Environment * Humanities (HUM courses designated as PSC) Peace and Justice Political Science Psychology Sociology Gender and Women's Studies * * Selected courses

Courses primarily emphasizing skills (such as acting, painting, sculpting, public speaking, etc.) are not acceptable. Students should consult their Department Chair.

DECLARATION OF MAJOR

All engineering students are enrolled in a common freshman year curriculum with the exception of a second semester science requirement which is program dependent. By the end of February of freshman year, all freshman engineering students are required to declare their major field of study, i.e., Chemical, Civil, Computer, Electrical, or Mechanical Engineering.

Engineering students who wish to change their major within the College of Engineering must contact the chairperson of the department in which they are interested. The Chair will arrange for the review of the student's academic record and notify the student of the decision. The department will then notify the College of the change for its records. Students who are unsure of which major they would like to enroll in should arrange to meet with their academic adviser to discuss their options.

Engineering students who wish to change their major to an area outside of engineering must apply for admission to the dean of the college offering that program.

Students who wish to change their major to Engineering from another college within the university, must contact the Associate Dean of Academic Affairs in the College of Engineering.

DEGREE PROGRAMS

BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

The chemical engineer typically uses the principles of mathematics, chemistry, physics and engineering sciences often with biology to creatively solve technical and commercial problems arising in industries which manufacture products by chemical reactions. These solutions must respond to economic constraints as well as social, ethical, environmental and safety implications. The chemical engineer may also apply these principles in related fields where the management of chemical transformations is important, such as preservation of the environment, pharmaceutical manufacturing, bio-engineering or the creation of new medical technology. Finally, the chemical engineer can apply understanding of fundamental principles to fields that interact indirectly with chemical technology, such as industrial management and patent law.

Program Educational Objectives - Consistent with the University's Augustinian Mission that values broadly-educated, and well-rounded individuals, the Program Educational Objectives of the Chemical Engineering Department are to produce Chemical Engineering graduates who:

- ❑ Apply the scientific principles underlying technology and possess the technical skills needed to contribute to the chemical engineering profession immediately at an entry level.
- ❑ Enter related professions, should they choose to do so, including professions that require further education.
- ❑ Display personal and interpersonal skills, such as effective communication and multidisciplinary team interactions, that facilitate the effective practice of their profession.
- ❑ Recognize the importance of, and have the ability to, engage in lifelong learning.
- ❑ Continue to learn and grow professionally, and who take advantage of professional opportunities as they arise to enhance their career.

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 skill in chemical engineering design - the solving of non-routine, open-ended problems requiring the exercise of judgment, and constrained by economic, 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 course.

College of Engineering

Electives in the sophomore, junior, and senior years allow the student to tailor the program toward career goals. In the senior year, the student develops the ability to work independently by carrying out a chemical engineering 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 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. See www.villanova.edu/engineering/departments/chemical/ for details.

Program of Studies

Sophomore Year						
First Semester		Credits		Second Semester		Credits
CHE 2031	Intro. Chemical Processes	3		CHE 2032	ChemE Thermodynamics I	3
CHM 2211	Organic Chemistry I	3		CHE 2232	Fluid Mechanics	3
CHM 2201	Organic Chemistry Lab I	1			Science Elective ²	3
MAT 2705	Differential Equations with Linear Algebra	4			Science Lab Elective ²	1
	Humanities/Social Science Elective ¹	3			Humanities/Social Science Elective ¹	3
	Humanities/Social Science Elective ¹	3			Open Elective	3

Junior Year						
First Semester		Credits		Second Semester		Credits
CHE 3031	Heat Transfer	3		CHE 3032	Mass Transfer	3
CHE 3131	ChemE Thermodynamics II	3		CHE 3332	ChemE Reactor Engineering I	3
CHE 3931	Technical Communications	3		CHE 3932	ChemE Lab I	3
	ChemE Elective ²	3			Science Elective ²	3
	Science Elective ²	3			Open Elective	3
	Science Lab Elective ²	1				

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Senior Year						
First Semester		Credits		Second Semester		Credits
CHE 4131	Process Design I	3		CHE 4232	Chemical Process Control	3
CHE 4331	Process Modeling & Analysis	3			ChemE Elective ²	6
CHE 4931	ChemE Lab II	3			Humanities/ Social Science Elective	3
	ChemE Elective ²	3			Open Elective	3
	Humanities/Social Science Elective ¹	3				

¹Refer to the College of Engineering section on Humanities/Social Science electives.

²Science, Humanities/Social Science, Open, and ChemE Elective slots may be moved.

Chemical Engineering Electives (4)

Courses may be taken all in one area or selected from among different areas

Advanced Chemical Engineering
Modeling and Numerical Methods II
Transport Phenomena
Process Control Theory
Chemical Engineering Economics
Chemical Reactor Engineering II
Process Design II

Advanced Materials Engineering
Introduction to Material Science
Nanomaterials/Surface Science
Polymer Science and Engineering
Biomaterials

Biological Engineering Systems

Introduction to Biotechnology
Bioseparations
Biomaterials

Sustainable Engineering Systems

Introduction to Air Pollution Control
Climate Change & Sustainability
Life Cycle/Impact Assessment

Research

Chemical Engineering Research I
Chemical Engineering Research II

Note: Students must take both research courses if selected. Only ChemE Research I counts as a chemical engineering elective. ChemE Research II counts as an open elective.

Science (3) and Science Lab (2) Electives

One Science and Science Lab Elective must be CHM 2212 and CHM 2202 or CHM 3416 and CHM 3402.

Approved Science Electives: BIO 2101, BIO 2103, BIO 2105, BIO 2106, BIO 3105, BIO 3351, BIO 3595, BIO 4205, BIO 4505, CHM 2212, CHM 3416, CHM 3417, CHM 3511, CHM 3514, CHM 4611, CHM 4621, CHM 4622, CHM 4623, PHY 2402, PHY 2416,

College of Engineering

PHY 3310, PHY 4000, PHY 4002, PHY 4100, PHY 4102, PHY 5100, PHY 5102, PHY 5200, PHY 5300, PHY 5500, PHY 5502.

Approved Science Lab Electives:

BIO 2101, BIO 2104, CHM 2202, CHM 3402, CHM 3501, CHM 3503, CHM 3505, CHM 3506, CHM 4601, CHM 4603, PHY 2403, PHY 2417, PHY 3311, PHY 4001, PHY 4003.

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

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: Our mission is to provide our students with a high quality, contemporary, broad-based civil engineering education within a Judaeo-Christian, humanistic context preparing our students for professional practice, graduate study, and life-long learning.

Program Educational Objectives - Upon graduation from the Civil Engineering program at Villanova University, graduates are prepared to:

- Use their broad-based civil engineering backgrounds to perform as entry-level engineers in general civil engineering or in environmental, geotechnical, structural, transportation, or water resources engineering.
- Enter graduate school in the disciplines listed above or closely related disciplines, as well as other fields such as business and law.
- Continue the process of life-long learning as required for long-term personal and professional growth.
- Recognize their professional and ethical responsibilities to society as members of the engineering professional community.
- Use communication, computer, and teamwork skills to help themselves and their employers succeed.
- Relate their personal and professional lives to the Judaeo-Christian, humanistic tradition.

The broad-based curriculum provides flexibility and meets student needs through a selection of electives. More information on the Civil Engineering program can be found at the Department website www.villanova.edu/engineering/departments/civil/.

Villanova University

Program of Studies

Sophomore Year						
First Semester		Credits		Second Semester		Credits
CEE 2105	Mechanics I	4		CEE 2106	Mechanics II	4
CEE 2602	Civil Egr. Measurements	3		CEE 2311	Environmental Egr. Science	3
MAT 2500	Calculus III	4		MAT 2705	Differential Equations with Linear Algebra	4
PHY 2402	Physics II: Electricity and Magnetism	3		CEE 2211	Transportation Engineering	3
GLY 2805	Geology for Engineers	3			Free Elective	3

Junior Year						
First Semester		Credits		Second Semester		Credits
CEE 2107	Mechanics III	4		CEE 3412	Structural Design	3
CEE 3321	Water & Wastewater Treatment	3		CEE 3511	Hydraulic Egr. & Hydrology	3
CEE 3401	Structural Analysis	3		CEE 3801	Soil Mechanics	3
CEE 3704	CE Numerical & Statistical Analysis	3		CEE 3901	Soil Mechanics Laboratory	1
CEE 3921	Environmental Egr. Laboratory	1		CEE 3912	Structural Egr. Laboratory	1
	Humanities: THL \geq 2000	3			Humanities Elective from THL, PHI, PJ, ETH 2050	3

College of Engineering

Senior Year						
First Semester		Credits		Second Semester		Credits
CEE 4601	CEE Professional Practice	3		CEE 4606	CEE Capstone Design Project	3
CEE 4701	Economy and Risk	3		EGR 2001	Engineering: Humanistic Context ³	3
	CEE Senior Electives ¹	9			Social Science Elective from ECO, GEV (Geography Courses), PJ, PSC, PSY, SOC, WS	3
	Technical Elective ²	3			Humanities Elective	3
					Free Elective	3
					Technical Elective ²	3

¹CEE Senior Electives include:

- CEE 4224 Transportation Facilities Design
- CEE 4331 Solid & Hazardous Waste
- CEE 4412 Advanced Structural Engineering
- CEE 4521 Water Resources Engineering Design
- CEE 4801 Foundation Design

²Technical Electives include

- CEE 3235 Advanced Transportation Engineering
- CEE 4608 Project & Construction Management
- CEE 4612 CEE Undergraduate Research
- GEV 1050/1051 Environmental Science I/II
- GEV 4101 Geographic Information Systems
- GEV 5100 Resource Management & Conservation
- GEV 5300 Disasters: Natural Hazards

and other courses listed in this catalog and offered by the following departments: Astronomy, Biology, Chemistry, Chemical Engineering, Civil and Environmental Engineering, Computing Sciences, Electrical and Computer Engineering, Mathematical Sciences, Mechanical Engineering, and Physics. The selection must be done with the advice and approval of the student's adviser and chair.

³EGR 2001 fulfills the College Ethics requirement.

BACHELOR OF SCIENCE IN COMPUTER ENGINEERING

The Program Educational Objectives of the Computer Engineering program are to produce graduates who:

- can use their knowledge, analytical, and design skills to generate and validate appropriate solutions to practical real world problems.

- ❑ can communicate and work effectively with others having different roles or responsibilities.
- ❑ continue to develop their professional knowledge and skills throughout their career.
- ❑ have successful careers, and practice their chosen discipline with professionalism, care, and integrity.

The curriculum is structured to provide a thorough foundation in the fundamentals of computer engineering. Design and analysis are emphasized throughout the curriculum, using a project-based structure to teach students how to learn on their own and in teams, and synthesize new engineering solutions by using their knowledge and analytical skills. Great importance is placed on developing oral and written communications skills. The curriculum also provides opportunities for an increased awareness of the broader implications of technology and of the social responsibilities of the profession. These Program Educational Objectives are met by satisfying the following outcomes:

- A. An ability to apply knowledge of mathematics, science, and engineering
- B. An ability to design and conduct experiments, as well as to analyze and interpret data
- C. An ability to design a system, component, or process to meet desired needs
- D. An ability to function on multi-disciplinary teams
- E. An ability to identify, formulate, and solve engineering problems
- F. An understanding of professional and ethical responsibility
- G. An ability to communicate effectively
- H. The broad education necessary to understand the impact of engineering solutions in a global and societal context
- I. A recognition of the need for, and an ability to engage in life-long learning
- J. A knowledge of contemporary issues
- K. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Further details of these educational objectives and the program outcomes are available at the website of the Electrical and Computer Engineering Department.

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

College of Engineering

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.

Program of Studies

Sophomore Year						
First Semester		Credits		Second Semester		Credits
ECE 2042	Fundamentals of Computer Engineering I	3		ECE 2044	Fundamentals of Computer Engineering II	3
ECE 2043	Fundamentals of Computer Engineering I Lab	1		ECE 2045	Fundamentals of Computer Engineering II Lab	1
ECE 2409	Fundamentals of MATLAB	2		ECE 2052	Fundamentals of Electrical Engineering I	3
ECE 2620	C++ Programming, Algorithms & Data Structures	4		ECE 2053	Fundamentals of Electrical Engineering I Lab I	1
ECE 2900	Intro to Electrical and Computer Engineering	1		ECE 3445	Computer Architecture	3
MAT 2705	Differential Equations with Linear Algebra	4		CSC 1300	Discrete Structures	3
	Humanities: THL \geq 2000	3			Science or Mathematics Elective	3

College of Engineering

Junior Year						
First Semester		Credits		Second Semester		Credits
ECE 3720	Engineering Probability Statistics	3		CSC 4181	Compiler Construction	3
CSC 1600	Operating Systems	3		ECE 3240	Discrete-Time Signals and Systems	4
ECE 3450	Digital Electronics	3		ECE 3971	Design Seminar - CPE	2
ECE 3900	Professional Development Seminar	2		ECE 4470	Computer Networks	4
	Science or Mathematics Elective	3			CPE Technical Elective*	3

Senior Year						
First Semester		Credits		Second Semester		Credits
ECE 4971	Design Project - CPE	3		ECE 4973	Design Project Report - CPE	1
	CPE Technical Elective*	3			CPE Technical Elective*	3
	Professional Electives***	6			Professional Electives***	6
	Ethics Elective**	3			Humanities Elective from THL, PHI, ETH, PJ, EGR 2001	3
					Free Elective	3

* Technical Electives chosen from the ECE Departmental list of approved courses.

**Ethics-based Elective chosen from the ECE Departmental list of approved courses.

*** Professional Electives, pre-approved by student's Academic Adviser, for the pursuit of minors, concentrations, and other academic plans.

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

The Program Educational Objectives of the Electrical Engineering program are to produce graduates who:

- can use their knowledge, analytical, and design skills to generate and validate appropriate solutions to practical real world problems.

- ❑ can communicate and work effectively with others having different roles or responsibilities.
- ❑ continue to develop their professional knowledge and skills throughout their career.
- ❑ have successful careers, and practice their chosen discipline with professionalism, care, and integrity.

The curriculum is structured to provide a thorough foundation in the fundamentals of computer engineering. Design and analysis are emphasized throughout the curriculum, using a project-based structure to teach students how to learn on their own and in teams, and synthesize new engineering solutions by using their knowledge and analytical skills. Great importance is placed on developing oral and written communications skills. The curriculum also provides opportunities for an increased awareness of the broader implications of technology and of the social responsibilities of the profession. These Program Educational Objectives are met by satisfying the following outcomes:

- L. An ability to apply knowledge of mathematics, science, and engineering
- M. An ability to design and conduct experiments, as well as to analyze and interpret data
- N. An ability to design a system, component, or process to meet desired needs
- O. An ability to function on multi-disciplinary teams
- P. E. An ability to identify, formulate, and solve engineering problems
- Q. F. An understanding of professional and ethical responsibility
- R. G. An ability to communicate effectively
- S. The broad education necessary to understand the impact of engineering solutions in a global and societal context
- T. A recognition of the need for, and an ability to engage in life-long learning
- U. A knowledge of contemporary issues
- V. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Further details of these educational objectives and the program outcomes are available at the website of the Electrical and Computer Engineering Department.

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,

College of Engineering

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.

Program of Studies

Sophomore Year						
First Semester		Credits		Second Semester		Credits
ECE 2052	Fundamentals of Electrical Engineering I	3		ECE 2054	Fundamentals of Electrical Engineering II	3
ECE 2053	Fundamentals of Electrical Engineering I Lab	1		ECE 2055	Fundamentals of Electrical Engineering II Lab	1
ECE 2409	Fundamentals of MATLAB	2		ECE 2042	Fundamentals of Computer Engineering I	3
ECE 2900	Intro to Electrical and Computer Engineering	1		ECE 2043	Fundamentals of Computer Engineering I Lab I	1
MAT 2705	Differential Equations with Linear Algebra	4		ECE 3720	Engineering Probability and Statistics	3
PHY 2402	Physics II, Electricity & Magnetism	3		MAT 2500	Calculus III	4
PHY 2403	Physics Lab for Engineering	1			Humanities: THL _≥ 2000	3

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Junior Year						
First Semester		Credits		Second Semester		Credits
ECE 3220	Signal Processing	4		ECE 3450	Digital Electronics	3
ECE 3500	Electronic Materials and Devices	4		ECE 3690	Engineering Electromagnetics	4
ECE 3550	Analog Electronics	4		ECE 3770	Electrical Communications	4
ECE 3900	Professional Development Seminar	2		ECE 3970	Design Seminar - EE	2
	Science, Technical or Mathematics Elective	3		ECE 4290	Engineering System Models and Control	4

Senior Year						
First Semester		Credits		Second Semester		Credits
ECE 4970	Design Project - EE	3		ECE 4972	Design Project Report - EE	1
	EE Track Elective*	3			EE Track Elective*	3
	Professional Electives***	6			Professional Electives***	6
	Ethics Elective**	3			Humanities Elective from THL, PHI, ETH, PJ, EGR 2001	3
					Free Elective	3

*Track Electives chosen from one of the following tracks: Signal Processing Systems, High Frequency Systems, Embedded Systems, Electronic Systems, Power Systems, or General Electrical Engineering. See Approved Lists of Courses of EE Tracks.

**Ethics-based Elective chosen from ECE Departmental list of approved courses.

***Professional Electives, preapproved by student's Academic Adviser, for the pursuit of minors, concentrations, and other academic plans.

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

Mechanical Engineers are concerned with applying the principles of solid mechanics, fluid mechanics, thermodynamics, heat transfer, material science, dynamics

and control to the analysis and design of machines and systems of all types. In applying this technical knowledge, 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 The department is committed to provide a strong educational experience in the discipline of mechanical engineering, which at the same time, is sufficiently broad to prepare the students adequately for the societal and professional aspects of their careers. Students will be educated to be professionally competent and socially responsible.

Program Educational Objective

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;
- apply their knowledge and skills to successfully practice professions other than mechanical engineering if they desire;
- advance in their chosen career paths by utilizing their technical, communication, interpersonal, and leadership skills;
- demonstrate the desire for enhancing their personal and professional growth by making progress toward, or successfully completing an advanced degree, and/or professional development courses, and/or engineering certification;
- be actively engaged in service to their profession and their communities, consistent with the tradition of St. Augustine.

The first two years of the mechanical engineering program are devoted to laying a foundation of mathematics, physical science, and the general engineering sciences. The junior and senior years are devoted primarily to mechanical engineering topics. The required courses span the field of mechanical engineering, and career/ME electives provide the opportunity to pursue specific areas of the discipline in greater depth. The student chooses three courses (9 credit hours) of technical electives plus an additional three credits of a career/free elective. The 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.

All mechanical engineering students are required to take at least two of the elective courses offered by the department, designated as the ME elective in the program of studies. Ordinarily students will take three or more such courses, designated career/ME electives and one other course, designated the career/free elective, which can be any three credit course. However, the career/ME and the career/free elective slots may be applied to a minor or concentration in Liberal Arts & Sciences or to a minor in Business. The specific courses must be selected in conjunction with the appropriate departmental office and the student's academic adviser. Requirements for a minor are set by the appropriate department. All concentrations and minors must be approved by the Chair of Mechanical

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Engineering. Any course which meets a mechanical engineering curriculum requirement and also a requirement for a concentration or minor may be counted for both.

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 career electives, minors or concentrations, graduate studies, undergraduate research, and completion of degree requirements for graduation.

Program of Studies

Sophomore Year						
First Semester		Credits		Second Semester		Credits
MAT 2500	Calculus III	4		CEE 2103	Mechanics of Solids	3
ME 2100	Statics	3		COM 1101	Business and Professional Communication	3
ME 2502	Professional Development Seminar	1		MAT 2705	Differential Equations with Linear Algebra	4
ME 2505	ME Analysis & Design	4		ME 2101	Dynamic Systems I	3
PHY 2402	Physics II: Electricity and Magnetism	3		ME 2900	ME Lab I	1
PHY 2403	Physics Lab for Engineering	1		ME 3100	Thermodynamics I	3

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Junior Year						
First Semester		Credits		Second Semester		Credits
ECE 2052	Fund of Electrical Egr	3		ME 3300	Material Science	3
ECE 2053	Fund. of Electrical Egr Lab	1		ME 3333	Manufacturing Engineering	3
ME 3102	Dynamic Systems II	3		ME 3900	ME Lab II	1
ME 3402	Solid Mechanics and Design I	3			ME Restricted Elective ¹	3
ME 3600	Fluids and Fluid Systems	3			Humanities: THL \geq 2000	3
ME 3950	Heat Transfer	3			Social Science/ Humanities Elective ²	3

Senior Year						
First Semester		Credits		Second Semester		Credits
ME 4801	Design Seminar I	2		ME 4802	Design Seminar in Mechanical Engineering III	2
ME 4902	ME Lab III	1			ME Elective/ Track Elective ³	3
	ME Elective/ Track Elective ³	3			Career/ME Elective ⁴	3
	Career/ME Elective ⁴	3			Professional Development Elective ⁶	3
	THL \geq 2000/PHI elective	3			Free/Career Elective ⁷	3
ETH 2050	Eth Trad & Contemp Life ⁵	3				

¹ Must be selected from ME 3103, ME 3403, ME 4850; a student in a track must take the appropriate course in the track.

² Course selection available from catalog or adviser.

³ Must be selected from the ME electives listed for the students in tracks; any ME elective for others.

⁴ a) an ME elective, or b) appropriate elective from 'hard' sciences and/or other engineering departments, or c) a course from the student's minor.

⁵ This course may be replaced with an approved ethics course from the student's minor.

⁶ List (subject to change): EGR 2001, ME 4050, ME 4600, CEE 4601, BL 1090.

⁷ Any 3-credit course offered at Villanova including a course from student's minor or ME 4010 (summer internship).

SPECIAL PROGRAMS

DUAL DEGREE PROGRAMS, MINORS AND OPTIONS

The College of Engineering provides the flexibility for its students to pursue various program additions and options. These include a dual degree program leading to a Bachelor of Arts degree, or a Bachelor's degree through the Villanova School of Business; a dual degree program leading to a Bachelor of Science in Computer Engineering and a Bachelor of Science in Electrical Engineering; academic minors in Business, Chemistry, Computer Engineering, Computer Science, Mathematics, Mechatronics, and Physics; the Honors Program; and the ROTC Programs. Also the College of Engineering offers a Five-Year Combined Bachelors/Masters Program in all programs.

DUAL DEGREE PROGRAM LEADING TO A BACHELOR OF SCIENCE IN COMPUTER ENGINEERING AND A BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Superior students may earn both the Bachelor of Science in Computer Engineering and the Bachelor of Science in Electrical Engineering degrees. The two degrees are awarded simultaneously upon completion of all requirements for both degrees. Because of the significant overlap between the two programs, it is possible to earn both degrees in four and a half years. Interested students should consult the ECE Special Programs Adviser as early in their undergraduate studies as possible to obtain additional information.

BACHELOR OF ARTS - DUAL DEGREE PROGRAM

Engineering students wishing to enter a Dual Degree Program must write a letter to the Dean of Engineering requesting admission into the program.

BIOENGINEERING MINOR

Villanova offers a minor in Bioengineering that bridges the Colleges of Engineering, Liberal Arts and Sciences, and Nursing and that provides an opportunity for an interdisciplinary experience for students in engineering, the sciences, and nursing. The minor will be completed by students taking a minimum of 12 credits of science or bioengineering courses outside of the major, a minimum of 9 credits of science or bioengineering courses inside the major (these satisfy the student's major and so do not add course load), and 3 credits from either inside or outside of the major (student's

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choice). A course in ethics is also required but this adds no additional course load since a course in ethics is already required of all engineering students.

The details of the requirements can be obtained by talking to an academic advisor, or from the site <http://www.villanova.edu/engineering/academics/undergrad/minors/bio/>.

COMPUTER ENGINEERING MINOR

The department offers a minor in computer engineering to students outside the major. The requirements include five required courses and two electives. The required courses are:

- ECE 1620: Engineering Programming and Applications
- ECE 2042 & 2043: Fundamentals of Computer Engineering I & Lab
- ECE 2044 & 2045: Fundamentals of Computer Engineering II & Lab
- ECE 2052 & 2053: Fundamentals of Electrical Engineering I & Lab
- ECE 3445: Computer Architecture (prerequisites ECE 2042 & 2043)

The two electives must be selected from the following list.

- ECE 5240: Multimedia
- ECE 5430: Microcomputer System Design (prerequisites ECE 2042 & 2043)
- ECE 5444: Introduction to Fuzzy Logic (prerequisite ECE 2409)
- ECE 5445: Introduction to Neural Networks (prerequisite ECE 2409)
- ECE 5450: Microcontrollers and Applications (prerequisites ECE2042 & 2043)
- ECE 5470: Topics in Computer Networks
- ECE 5477: Computer Communications Security
- ECE 5484: Advanced Digital System Design (prerequisite ECE 3450)
- ECE 5540: Digital Integrated Electronics (prerequisite ECE 3450)
- ECE 5790: Digital Signal Processing (prerequisite ECE 3220 or ECE 3240)
- ECE 5792: Real-Time Digital Signal Processing (prerequisite ECE 5790)

Prerequisite courses must be satisfied.

ELECTRICAL ENGINEERING MINOR

The department offers a minor in electrical engineering to science and engineering students outside the major. The requirements include six required courses and two electives.

Required Courses:

- ECE 2052 and ECE 2053 (lab): Fundamentals of Electrical Engineering I
- ECE 2054 and ECE 2055 (lab): Fundamentals of Electrical Engineering II
- ECE 2409: Fundamentals of MATLAB
- ECE 3690: Engineering Electromagnetics

One of the remaining courses must be chosen from the following two courses:

- ECE 3220: Signal Processing
- ECE 3240: Discrete-Time Signals & System

One of the remaining courses must be chose from the following two courses:

- ECE 3500: Electronic Materials & Devices
- ECE 3550: Analog Electronics

ENGINEERING ENTREPRENEURSHIP MINOR

The objective of the Engineering Entrepreneurship minor is to develop creative students who recognize opportunities; design innovative products and services to capitalize on the opportunities; and understand how to take action to make them a reality, either by creating an independent venture, or working within an existing company. The minor is limited to engineering students. The required courses are:

- EGEN 2100: Creativity and Innovation
- EGEN 2200: Engineering Entrepreneurship I
- EGEN 2300: Sophomore Practicum
- EGEN 3100: Engineering Entrepreneurship II
- EGEN 3300: Junior Entrepreneurship Practicum I
- EGEN 3200: Engineering Entrepreneurship III
- EGEN 3300: Junior Entrepreneurship Practicum II
- EGEN 4200: Engineering Entrepreneurship IV

MECHATRONICS MINOR

The purpose of the mechatronics minor is to provide interested undergraduate Mechanical Engineering and Electrical and Computer Engineering students an opportunity to undertake interdisciplinary courses of relevance to state-of-the-art electromechanical system applications. The requirements of the minor according to major are the following. ME and ECE elective courses can be replaced by an approved list of graduate courses.

Mechanical Engineering Majors

Required ME Courses:

- ME 2100: Statics
- ME 3150: Introduction to Dynamics
- ME 4102: System Dynamics

Required ECE Courses:

- ECE 2042 and ECE 2043 (lab): Fundamentals of Computer Engineering I
- ECE 2052 and ECE 2053 (lab): Fundamentals of Electrical Engineering I
- ECE 2054 Fundamentals of Electrical Engineering II

One of the remaining courses must be chosen from the following ME electives:

- ME 5411: Mechatronics
- ME 5421: Robotics
- ME 5203: Automatic Control
- ME or EGR graduate course from the list below

One of the remaining courses must be chosen from the following ECE electives:

- ECE 3550: Analog Electronics
- ECE 4290: Engineering System Models and Controls
- ECE 5450: Microcontrollers
- ECE 5800: Electric Machines
- ECE or EGR graduate course from the list below

Graduate courses accepted for Mechatronics Minor:

- ME 7204 - Comp-Aided Anal Multibody Sys

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ME 7205 - Advanced Dynamics
ME 8204 - Robotics: Analysis & Control
ME 8402 - Control Systems Engineering
EGR 8302 - Digital Control
EGR 8303 - Optimal & Model Pred Control
ECE 7500 - Fund Solid State Electronics
ECE 8320 - Control Systems Engineering
ECE 8340 - Real-time Control & Robotics
ECE 8342 - Digital Control Systems
ECE 8425 - Microproc & Microcomp
ECE 7550 - Linear Integrated Electronics
ECE 8800 - Electric Machinery
ECE 8810 - Power System Modeling

Electrical and Computer Engineering Majors

Required ME Courses:

ME 2100: Statics
ME 3150: Introduction to Dynamics
ME 4102: System Dynamics

Required ECE Courses:

ECE 2052 and ECE 2053 (lab): Fundamentals of Electrical Engineering I
ECE 2054 and ECE 2055 (lab): Fundamentals of Electrical Engineering II
ECE 2042 and ECE 2043 (lab): Fundamentals of Computer Engineering I

One of the following courses must be chosen from the following ME electives:

ME 5411: Mechatronics
ME 5421: Robotics
ME 5203: Introduction to Automatic Control

One of the remaining courses must be chosen from the following ECE electives:

ECE 5390: Control System Design
ECE 5450: Microcontrollers
ECE 5800: Electric Machines

FIVE-YEAR COMBINED BACHELORS/MASTERS PROGRAMS

In many fields of engineering the Master's degree is rapidly becoming the entry level requirement for engineering graduates seeking employment. The College of Engineering offers the opportunity to those students who wish to obtain a Bachelor's and a Master's degree in five years. This program is academically demanding and requires a recommendation from the student's undergraduate program adviser.

Requirements vary among the programs. Students interested in the Combined Bachelors/Masters Program should consult their program of interest.

MINORS OUTSIDE THE COLLEGE OF ENGINEERING

Students should contact the Dean's Office in the respective college regarding the specific program.

ACADEMIC POLICIES & GENERAL INFORMATION

Unless otherwise noted, the College of Engineering 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 Engineering. Such policies may change without prior notice. Policies specific to the College of Engineering follow:

ACADEMIC STANDING

In order to remain in good academic standing, undergraduate engineering students must maintain a cumulative Grade Point Average (GPA) of at least 2.00 and a cumulative Technical Grade Point Average (TGPA) of at least 2.00. Technical courses are defined as all engineering, science, and mathematics courses.

Academic Standing Review: Students who receive a grade of D, D-, F, N or Y, or whose overall or semester GPA or TGPA falls below the requirements stated above, will be reviewed by the Academic Standing Committee. This review takes place at the end of each semester when grades are deemed final by the Registrar's Office.

Students who receive grades of D, D-, F or Y, but who have a GPA and TGPA of at least 2.00, will receive a letter of concern, mailed to the permanent address on file with the University.

Students with a semester GPA or TGPA below the required minimums stated above will receive a letter of poor performance. These students will be instructed to meet with their academic adviser to plan for ways to improve their future performance.

Academic Probation: Students with a GPA or TGPA below the required minimums stated above, may be placed on Academic Probation and will be notified by an official letter from the Dean's Office. While on academic probation, the student is ineligible to participate in any extracurricular activities. Normally, a student is not permitted to be on probation for more than one semester.

Dismissal from the College: A student may be asked to transfer out of the College of Engineering. A letter informing the students will be sent by courier. This letter will contain instructions for the student as well as deadline dates for actions that the student must take.

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.)

ADVANCED PLACEMENT CREDIT

Information on advanced placement credit is found at:

www.villanova.edu/engineering/resources/policies/index.htm?page=coursecredit.htm

ADVISING

During the freshman year a student is encouraged to learn more about the engineering profession in order to make a more informed choice of a major field of study. Assistance necessary to arrive at this decision (which is made prior to pre-registration for sophomore year) is provided by the College of Engineering in the following ways:

As a freshman, a student is assigned to a faculty adviser, who provides career planning advisement and when appropriate, referrals. In addition, the College of Engineering sponsors programs that inform freshman students about career opportunities available in each major field of engineering. Finally, all freshmen are required to take EGR 1200 Interdisciplinary Projects I and EGR 1205 Interdisciplinary Projects II. These courses provide both an overview and hands-on experience in all fields of engineering offered by the College.

Academic advisement for freshmen and upper class engineering students is provided by the student's faculty adviser.

AUDIT

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 student's adviser.

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 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 undergraduate engineering students. To be eligible an undergraduate student must be a senior, majoring in engineering, with a cumulative grade point average of at least 3.50 at the end of the Fall term, who will graduate within the current academic year.

Dean's Award for Meritorious Service: This award was established to recognize exceptional service to the College of Engineering by undergraduate engineering students. To be eligible nominees must be senior engineering students who are 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.

National Honorary Engineering Societies: In order 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.

COMPUTING

College and University Computing. The entire campus is linked via a high-speed network and is connected to the internet. The College has multiple computer labs reserved for use exclusively by engineering students. Access to the workstations in these labs is provided 24 hours a day, 7 days a week, with proper authorization of the student's Wildcard. The College also provides Terminal Services which allows students to run Engineering software remotely. Students are issued wireless laptop computers as part of their curricula. New computers are issued every two years. Support of the program is provided by UNIT, the University's IT group, with a walk-in, on-line, and telephone help desk system.

Departmental Computing. There are more than 100 microcomputer workstations located in engineering classrooms, laboratories, and the four engineering departments.

The Chemical Engineering Department makes available a number of personal computers for student use in carrying out classroom assignments. It has also dedicated several personal computers to data acquisition and control in laboratory experiments. Chemical Engineering students utilize two computer laboratories to run packaged software for simulation of process systems, including AspenTech's ASPEN-PLUS. The departmental computer laboratories also provide a wide range of special-purpose software prepared by the department faculty in the sciences of material and energy balances, thermodynamics, process control, fluid flow and heat/mass transfer.

The Civil and Environmental Engineering Department utilizes a variety of industry specific software in its classes. Examples include AUTOCAD, MATLAB, STAAD, PCA BEAM, PCA COL, HEC-RAS, HEC-HMS, HCS, SIM Traffic and others. These packages are available through the college laptop program and computer labs. Student exposure to computer based applications includes spreadsheet and economic analysis, structural design and analysis of buildings and bridges, slope stability, stream water quality modeling and waste load allocations, sensitivity and matrix analysis of civil engineering systems, watershed hydrology and river hydraulics, and transportation system planning and simulation of traffic systems. The department maintains computers in its laboratories to support senior level projects undergraduate research.

The Electrical and Computer Engineering Department utilizes Sun file servers with Sun workstations, which are available in the Advanced Computer Systems Laboratory. In addition the department has PC's, CAE workstations and Microcontroller Development Systems. The department software includes UNIX, SMP, ILS, HP ECE Design Center software, VHDL CAD Tools, MATLAB, SIMULINK, Electronics Workbench, and PSpice. This software is used for digital signal processing, real-time control and robotics, microwave measurement, and the design of analog and digital circuits and systems.

The Mechanical Engineering Department has personal computers that are equipped with data acquisition systems and software for graphing, designing, and calculating. Software includes MATLAB, FLUENT, Mathcad, ANSYS, AUTOCAD, PCDEFORMTM, ADAMS, Working Model 3DTM and other applications programs used for finite element analysis, heat transfer and fluid flow, and multi-body dynamic analysis.

INTERNATIONAL STUDIES

The College of Engineering, recognizing the continued changes globally in both the learning and practicing of the skills of engineering, encourages all majors to consider studying in an overseas university some time during their four years at Villanova. By enhancing language and communication skills, in addition to taking courses in engineering where appropriate, Villanova Engineers will strengthen their own liberal arts program so integral to a Villanova Engineering degree.

For more information contact your Department Chair or the International Studies Office, Middleton Hall, 2nd floor.

The University policy on International Studies states, in part:

“If a student enrolls in a course that is not listed on his/her Prior Approval Form, he/she must obtain the appropriate department chair’s approval via email prior to continuing in the class.”

The College strongly emphasizes this policy. Accordingly, it will not accept credits for any course taken abroad that is not pre-approved and listed on the student’s Prior Approval Form.

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 maintains modern laboratory facilities to support the Bachelor of Science in Chemical Engineering curriculum. Experiments in the two Chemical Engineering Laboratory courses range from the demonstration of fundamental principles in bench-scale or pilot plant equipment, to hands-on experience with fully integrated, industrial scale process equipment. In addition, the department maintains extensive general-purpose laboratory capabilities for those students who carry out an experimental investigation as part of their senior Senior Research project.

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 materials (soils, concrete, and steel), the environment, geology, structures, measurements, fluid mechanics and hydraulics. The department’s newest facility, the Structural Engineering Teaching and Research Lab, opened in May 2005. The building provides 5,000 sq ft of useable floor space to test full-scale structural members up to 90 feet in length. The building includes two smaller laboratories for testing construction materials under various environmental conditions. The facility supports undergraduate instruction as well as both undergraduate and graduate research.

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,

Intelligent Systems, 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. Laboratories currently available include Manufacturing Processes, Thermodynamics, Engine Testing, Materials Testing and Material Science, Control, Vibration, Stress, Heat Transfer, Fluid Mechanics, and Wind Tunnel.

RESOLUTION OF ACADEMIC PROBLEMS

Problems of an academic nature are best resolved by the student meeting directly with the professor with whom the student has the problem. If the problem cannot be adequately resolved in this manner, the department chair should be consulted. In nearly all cases, matters are resolved at this level or lower. In special cases, the Associate Dean for Academic Affairs can be consulted to attempt to draw the process to closure.

In all cases it is imperative that the student, not the student's parents or guardians, deal with the matter. At Villanova, part of the education of all students is learning to constructively deal with conflicts and the formulation and execution of solutions to these conflicts in a rational way. Clearly, this can happen only if the student is intimately involved in the process.

STUDENT ORGANIZATIONS

In order 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.

Refer to the website: www.villanova.edu/engineering/organizations/ for information on student organizations.

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.

REGISTRATION POLICIES

REGISTRATION

Qualified undergraduate engineering students are permitted and encouraged to enroll in more challenging courses than those specified in their standard curriculum, provided that they obtain approval from their Department Chair and other appropriate individuals where necessary, as indicated below.

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Required and elective courses in the humanities and social sciences may be taken through the Honors Program for those students who qualify. Application should be made directly to the Director of the Honors Program.

Undergraduate students wishing to enroll in an engineering graduate course must have written approval from their Department Chair and the chair of the department offering the course. Permission will normally be granted only to seniors who have a cumulative Grade Point Average of 3.0 or higher. Permission to enroll in graduate courses offered by other Colleges within the University must be obtained from the Dean of that College as well as the chair of the department offering the course and the student's Department Chair.

COURSE DROP/ADD

A student may drop and/or add courses during the first week of a semester without incurring academic penalty or affecting the student's official transcript. After the drop/add period, a student must seek departmental approval for dropping or adding courses. A student may drop/add on-line but only with an approval code from his/her academic adviser and only during the drop/add period.

COURSE OVERLOADS

The individual engineering majors are comprised of appropriately sequenced course groupings referred to as "regular semester course loads." Students enrolled may take up to four credits, or one course, overload in any given semester provided that:

1. a freshman has permission from the office of the Associate Dean of Academic Affairs. Normally, only second semester freshmen with a GPA of at least 3.5 are permitted to overload, or
2. an upperclassman has approval from his adviser and chair. Normally a GPA of at least 3.0 is required in this case.

MINORS

Minors may be pursued in the College of Engineering. For further information on minors, please review the Special Programs section above or consult

<http://www.engineering.villanova.edu/academics/undergrad/minors/>

PRE-MATRICULATED CREDIT

College-level work completed prior to high school graduation may be awarded transfer credits upon receipt of the following:

1. an official letter from the high school principal, guidance 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; and

3. an official, seal-bearing transcript from the college/university showing a grade of C or better.

Courses taught at the high school and courses taught in a distance learning format will not be accepted.

Each supporting document is to be sent to the Dean of Engineering.

SATISFACTORY/UNSATISFACTORY GRADE POLICY

Upperclass engineering students may elect to take, on a Satisfactory/Unsatisfactory basis, one course per semester which meets all of the following criteria: 1) it is not specifically designated by course number in the curriculum of the student's major; 2) it is not being given by the department in which the student is majoring; 3) it is not designated as a Technical Elective in the curriculum of the student's major; and 4) permission to take the course has been specifically granted by the chair of the department in which the student is majoring.

To take a course on a Satisfactory/Unsatisfactory basis, the student must first register for the course by the normal procedure. After registration has been completed, the student must complete a Satisfactory/Unsatisfactory form (supplied by the Registrar's Office); this form must be signed by the student's Department Chair.

Other pertinent information can be found under the "Grading System" policies in the University section of this Catalog.

TECHNICAL ELECTIVES

Technical Electives for upper class students differ by department. Please visit the individual departmental web sites for more information.

TRANSFER OF CREDIT

With recommendation of their Department Chair, and approval of the Dean of Engineering, active engineering students are permitted to earn course credit at other schools. In order to initiate a request to do this, the student must obtain and complete a Course Elsewhere Form, available in the Office of the Dean of Engineering. A complete description of the substitute course content in the form of a copy of the other institution's official course catalog or a copy of the other institution's web description must be attached to this form. The student should allow 7-10 days for final action to be taken on the request. After that time, the student making the request should contact the office of the Dean of Engineering to determine the outcome.

Students who have completed approved courses elsewhere must request that institution to forward a transcript to their Department Chair. NOTE: only courses in which a grade of "C" (or the equivalent) or better is received will be transferred for credit. Grades of courses taken elsewhere are not included in the calculation of the Grade Point Average (GPA) or Technical Grade Point Average (TGPA) at Villanova University.

It is the University policy that Villanova normally 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.

College of Engineering

It is also the University policy that Villanova will 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.

For college-level work done prior to high school graduation, see the Pre-Matriculated College Credit policy in the University Section of this catalog.

WITHDRAWAL FROM COURSES

Engineering student requests for authorized withdrawal from a course without penalty (WX) will be granted automatically until approximately three and a half weeks after mid-term break (view the Academic Calendar for official date).

During this period the following approvals are required for a course withdrawal:

1. If a student is requesting to withdraw from one course, only the approval of the academic adviser is needed.
2. If an upper-class student is requesting to withdraw from more than two or more courses, the approval of the academic adviser and department chairman is needed because of the larger impact on the student's program, including the possibility of dropping into part-time student status.
3. If a freshman engineering student is requesting to withdraw from two or more courses, the approval of the academic adviser and the associate dean is needed because of the impact on the student's program and the need for the student to consider college course-elsewhere rules.

After that date, course withdrawal will be authorized only under exceptional circumstances such as serious personal or medical problems for which the student must provide evidence. The Associate Dean of Academic Affairs will decide whether or not to grant the requests based on the information supplied by the student.

Course withdrawals may delay a student's planned graduation date, so students should discuss the implications with their advisers.

WITHDRAWAL FROM THE UNIVERSITY

Official withdrawal from Villanova University itself must be authorized by the dean of the student's college. A student must submit a formal letter (or the appropriate college form) to the dean and participate in an interview. The letter of withdrawal may be countersigned and/or submitted by the student's parents or legal guardian. Applications for withdrawal usually must be submitted by the end of the fourth academic week.

DEPARTMENTS

Chemical Engineering

Chair: Dr. Randy Weinstein
Office: 217 White Hall, tel. 610-519-4950
Website: www.villanova.edu/engineering/departments/chemical/
Courses: www.villanova.edu/engineering/departments/chemical/undergrad/catalog.htm

Civil and Environmental Engineering

Chair: Dr. Ronald A. Chadderton
Office: 139 Tolentine Hall, tel. 610-519-4960
Website: www.villanova.edu/engineering/departments/civil/
Courses: www.villanova.edu/engineering/departments/civil/undergrad/catalog.htm

Electrical and Computer Engineering

Chair: Dr. Pritpal Singh
Office: 411 Tolentine Hall, tel. 610-519-4970
Website: www.villanova.edu/engineering/departments/electrical/
Courses: www.villanova.edu/engineering/departments/electrical/undergrad/catalog.htm

Mechanical Engineering

Chair: Dr. C. Nataraj
Office: 131 Tolentine Hall, tel. 610-519-4980
Website: www.villanova.edu/engineering/departments/mechanical/
Courses: www.villanova.edu/engineering/departments/mechanical/undergrad/catalog.htm

COLLEGE OF NURSING

M. Louise Fitzpatrick, Ed.D., Dean

Lesley Perry, Ph.D., Associate Dean

Rose M. O'Driscoll, M.S.N., Assistant Dean for Administration

M. Frances Keen, DNSc, Assistant Dean and Director of Undergraduate Program

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 generic BSN program, a BSN completion program for registered nurses, an accelerated BSN program for second degree students, an MSN program, a PhD 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 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. This license is transferable within the United States nationally by state. The undergraduate and graduate programs are both 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

Villanova University

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
600 Maryland Avenue, SW
Suite 100 West
Washington, DC 20024-2571
202/651-7000
1-800-284-CERT (2378)
www.nursingworld.org/ancc/.

Commission on Collegiate Nursing
Education
One Dupont Circle, NW, Suite 530
Washington, DC 20036
Phone: (202) 463-6930
Fax: (202) 785-8320
[www.aacn.nche.edu/
Accreditation/index.htm](http://www.aacn.nche.edu/Accreditation/index.htm)

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/
nursing@pados.dos.state.pa.us](http://www.dos.state.pa.us/bpoa/nursing@pados.dos.state.pa.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/

MISSION

The College of Nursing 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 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 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

College of Nursing

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 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 College 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 College 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 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 administrators of nursing and health services, 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 Doctoral 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 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.

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 administrators of nursing and health services, case managers, 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.

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 1103	1	CHM 1108	1
ACS 1000	3	ACS 1001	3
NUR 1101	2	NUR 1103	2
PSY 1000 or SOC 1000	3	SOC 1000 or PSY 1000	3
THL 1050 or PHI 1050	3	PHI 1050 or THL 1050	3
		ENG 1050	3
SOPHOMORE			
BIO 1205	4	BIO 1206	4
BIO 1181	3	NTR 2120	3
NUR 2104	2	NUR 2106	2
NUR 2105	1	NUR 2107	2
PSY 2200	3	MAT 1250	3
Elective	3	Soc. Studies Elective*	3
*Must be selected from the areas of History, Political Science, or Economics in consultation with the student's major adviser.			
JUNIOR			
NUR 3112	6	NUR 3116	6
NUR 3113	6	NUR 3117	6
NUR 3108	3	NUR 3110	3
NUR 3030	3	PHI 2115	3
SENIOR			
NUR 4101	6	NUR 4102	6

College of Nursing

NUR 4103	6	NUR 4107	6
NUR 4130	2	NUR 4110	5
THL Elective**	3		

**2000 level or above is recommended

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 2107. 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.

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.

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 Nursing Student Services advisor available to see a student during regular office hours.

ACADEMIC GRIEVANCE PROCEDURE

If a student has a grievance within a nursing course, he/she is 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, and Dean 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 2104, NUR 2106, NUR 3112, NUR 3116, NUR 4101, NUR 4102, and NUR 4110.
- ❑ 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 2.5 in order to advance to junior level courses with a clinical component.
- ❑ Students must successfully complete, in sequence, courses in the nursing major as indicated in the curriculum plan.
- ❑ Students must pass each clinical rotation within a course. If a student is unsuccessful in the first clinical rotation, the student may not progress to the second clinical rotation.
- ❑ The College of Nursing reserves the right to place on probation or withdraw any student whose performance is deemed unsatisfactory.
- ❑ Students whose primary language is not English will be encouraged to bring translation dictionaries to their examinations and be given extended time on tests. 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:
 - a. 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

College of Nursing

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.

b. 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 the NCLEX-RN examination.

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.

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.

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.

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 2.75 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.

Adult Students/Second Career Applicants. The College of Nursing welcomes applications from adults who wish to begin preparing for a career in nursing. These include individuals who possess undergraduate and/or graduate degrees in other fields as well as those adults entering college for the first time. Part-time study is possible during the introductory level of the program. Full-time study is required during the clinical portion of the program. All applicants must meet the entrance requirements for admission to the University. In addition, the College 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 Applicants. Graduates from diploma and associate degree nursing programs are eligible for admission. Requirements for admission include: transcripts from all academic institutions and proof of registered professional nurse licensure. Further inquiries should be directed to the College of Nursing.

Through a series of nursing examinations and clinical validation, a registered nurse student may demonstrate current nursing knowledge and earn credits in nursing. Specific policies and procedures may be obtained through the College of Nursing. Credit by examination is available through the College of Arts and Sciences for non-nursing courses. See the section on Registered Nurses, below.

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 Assistant Dean and Program Director of the Undergraduate Program or Assistant Dean for Administration 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 Assistant Dean and Director of the Undergraduate Program before submitting a request to the Assistant Dean and Director of the Graduate Program.

INTERNATIONAL STUDIES

The College of Nursing, in conjunction with the Office of International Studies, 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 Assistant Dean and Director of the Undergraduate Nursing Program or his/her academic adviser as early as possible. 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 International Studies. 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 International Studies, 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 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 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

Registered nurse students achieve advanced standing in the undergraduate program through transfer of applicable college credits and through successful completion of required validation exams in nursing and optional challenge exams in selected liberal education courses. Each of these mechanisms is described below.

REQUIREMENTS

All registered nurse students are expected to have the following on file prior to enrollment in Nursing 3000 and 3005:

- Entrance Health Examination and Laboratory Studies.
- Current CPR Certification including resuscitation and choking measures for infant, child, and adult with one person and two-person rescue procedures, and review of an Automated External Defibrillator.
- Current Pennsylvania R.N. License.
- Current Malpractice Insurance Certificate.
- Criminal background checks that comply with the Older Adults Protective Services Act and Child Protective Services Law, as well as urine drug screening.

TRANSFER OF LIBERAL EDUCATION COURSE CREDIT

Up to 64 credits in applicable liberal education courses may be transferred from accredited colleges or universities. A grade of 'C' or better must have been earned, and courses must be evaluated as equivalent to appropriate Villanova courses.

CREDIT BY EXAMINATION (LIBERAL EDUCATION COURSES)

Selected liberal education courses may be challenged through the University's Credit by Examination Program. RN students may challenge up to 12 credits in liberal education in accord with the policies and procedures of that program. Information is available from faculty advisers.

ADVISEMENT

RN students are assigned a faculty adviser when admitted to the College and are expected to consult with the adviser on a regular basis.

CLINICAL VALIDATION EXAMS IN NURSING

Clinical validation exams may be used to earn nursing credits. The exams may be repeated once, if necessary. The exams are NOT required for admission to the College. Contact the College of Nursing for specifics about validation exams accepted for credit.

NOTE: BSN candidates take NUR 3110; MSN candidates may take NUR 8904 after completing a course in statistics.

COURSE/CREDIT REQUIREMENTS (136 credits)

Physical Sciences/Math	(25 crs)	Nursing	(71 crs)
Anatomy & Physiology	(6-8 crs)	Excelsior Exams and/or	
Organic/Biochemistry	(3-4 crs)	AAS Nursing Credit Transfer	(27 crs)
Microbiology	(3-4 crs)	NUR 3110*	(3 crs)
Nutrition	(3 crs)	NUR 3000/3005	(4 crs)
Statistics	(3 crs)	Clinical Validation Exam	(20 crs)
Electives	(3 crs)	NUR 4102	(6 crs)
NUR 4107	(5 crs)		
NUR 4110	(6 crs)		
Humanities	(21 crs)	Social/Behavioral Sciences	(12 crs)
English/Literature	(3 crs)	General Psychology	(3 crs)
Philosophy-Health		Developmental Psychology	(3 crs)
Care Ethics	(3 crs)	Introductory Sociology	(3 crs)
Religious Studies	(6 crs)	Elective	(3 crs)
Humanities Elective	(9 crs)		
Free Electives	(6 crs)		

NOTE: BSN candidates take NUR 3110; MSN candidates may take NUR 8904 after completing a course in statistics.

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:

Albert Einstein Medical Center, Philadelphia, PA

College of Nursing

Alfred I. DuPont for Children, Wilmington, DE
Belmont Center for Comprehensive Treatment, Philadelphia, PA
Brooke Glen Behavioral Institute, Fort Washington, PA
Broomall Presbyterian Village, Broomall, PA
The Bryn Mawr Hospital, Bryn Mawr, PA
Children's Hospital of Philadelphia, Philadelphia, PA
Crozer-Chester Medical Center, Chester, PA
Delaware County Memorial Hospital, Drexel Hill, PA
Fox Chase Cancer Center, Philadelphia, PA
Holy Redeemer Home Health and Hospice Services, Philadelphia, PA
Hospital of the University of Pennsylvania, Philadelphia, PA
Home Care Network, Radnor, Pa
Lankenau Hospital, Philadelphia, PA
Learning Resource Center, College of Nursing
Mercy Fitzgerald Hospital, Darby, PA
Mercy Hospital of Philadelphia, PA
Mercy Suburban Hospital, Norristown, PA
Montgomery Hospital, Norristown, PA
Paoli Hospital, Paoli, PA
Penn Care at Home, Philadelphia, PA
Pennsylvania Hospital, Philadelphia, PA
Presbyterian Hospital, Philadelphia, PA
Riddle Memorial Hospital, Media, PA
St. Christopher's Hospital for Children, Philadelphia, PA
Thomas Jefferson University Hospital, Philadelphia, PA
Veterans Administration Medical Center, Philadelphia, PA

Selected school systems, day-care centers, community health centers, senior citizen centers, and industries are also used.

HEALTH AND WELLNESS CONCENTRATION

The Health and Wellness Concentration encompasses an understanding of the concepts of healthy living and nutrition and the knowledge of the changing health care system. The knowledge obtained in this concentration can be applied to studies in the areas of social sciences, business and psychology. Requirements for the minor include NUR 2200, NTR 2120 and NUR 7080. Students then choose one of the following courses to complete the requirement: NUR 4800, NUR 4802, NUR 7040, NUR 7081, NUR 7082, NTR 7120. The concentration requirement is 12 credits and is open to all non-nursing majors. Students must have junior status to take the 7000 level courses.

PART-TIME STUDIES

James R. Johnson, M.S., Director
Mary B. Bustamante, M.B.A., Associate Director

HISTORY AND OBJECTIVES

For over 90 years, the Division of Part-Time Studies has fulfilled the educational needs of thousands of men and women who were unable to or did not wish to pursue a regular full-time day program. Among those it serves are: high school graduates who are unable to undertake a regular full-time day program but wish to undertake or complete an unfinished baccalaureate degree program; professionals who seek to update and expand their knowledge and skills; college graduates who lack undergraduate requirements for admission to graduate or professional school or who are seeking initial secondary school teacher certification or additional endorsements for secondary school certification; high school graduates who do not qualify for acceptance as degree candidates but who seek the opportunity to prove themselves as non-matriculated students with the chance to matriculate upon the successful completion of a stipulated number of courses; and men and women of all ages who are simply interested in taking courses to enrich their personal lives. Senior citizens (age 65 and over) are eligible to enroll in undergraduate courses for personal enrichment only, but they are not charged for tuition. They may register AFTER the drop/add period, which is the first week of the semester, in courses in which the enrollment limit has not been reached.

Part-Time Studies provides comprehensive advising services at registration time and throughout the year to assist students in planning their educational careers and academic schedules. To acquaint new students with the general regulations of and services provided by the Part-Time Studies division and the University, a variety of web-based resources, including an [on line orientation and a virtual campus tour](#) are available via the Part-Time Studies web site at www.parttime.villanova.edu. The [University Counseling Center](#) and the [Career Services Office](#) provide additional services to the Part-Time Studies student.

Although Part-Time Studies mainly serves the part-time student, it is possible, with permission, for a student to take a full-time course load after two semesters. Even on a part-time basis, however, a Part-Time Studies student can, with approved transfer credits, complete a baccalaureate program in three to five years. With permission of the Director or academic advisor, Part-Time Studies students may enroll in day classes.

Part-Time Studies

Requirements for admission, advancement, and graduation are the same as those prevailing in the full-time undergraduate colleges. As a result, matriculated students may petition to transfer from Part-Time Studies to one of the full-time colleges without loss of credit.

The degrees pursued in Part-Time Studies are Villanova University degrees, in every respect commensurate with those offered by the full-time colleges of the University. The business programs are accredited by the American Assembly of Collegiate Schools of Business (AACSB). The Computer Science program is accredited by the Computing Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET).

ADMISSION

Application forms for admission to part-time undergraduate study are available online at www.partime.villanova.edu and may also be obtained from the Director, Part-Time Studies, Villanova University, 800 Lancaster Avenue, Villanova, Pennsylvania 19085.

Students seeking admission into degree programs (matriculated status) must submit complete records from all secondary schools and institutions of higher learning previously attended. Students seeking postgraduate status must submit transcripts showing degree and graduation date or a copy of the diploma from their baccalaureate degree institution. Students applying for non-matriculated (non-degree program) status must submit secondary school records indicating graduation or proof of receipt of a state equivalency diploma. To avoid delay, address all material to Part-Time Studies. Applicants for matriculated status are requested to have a set of complete records on file at least four weeks prior to registration in order to be evaluated in advance of enrollment. Registration as a non-matriculated student is suggested in those cases where transcripts are delayed.

Secondary school requirements for entrance to a specific curriculum are outlined in the University section of this Catalog. The requirement for non-matriculated status is proof of graduation from an accredited secondary school or proof of receipt of a General Educational Development Diploma.

Applicants for matriculation in a degree program will be evaluated on their previous academic records in high school and college, if applicable. Those who are not initially accepted as matriculated students (candidates in a degree program) may be accepted as non-matriculated students. Students will retain non-matriculated status until completion of at least 18 credit hours at Villanova at which time they will be re-evaluated for matriculation.

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Students attending other institutions who are in good standing and have permission to take undergraduate courses at Villanova may apply to Part-Time Studies as may high school seniors with strong academic backgrounds who have permission from their guidance counselor or principal. Senior citizens, those aged 65 or older, may enroll in undergraduate courses for personal enrichment only without the payment of tuition. Information on the application procedures and requirements for these particular categories may be obtained from the Part-Time Studies office.

READMISSION

A student who has not attended classes in Part-Time Studies for two years or longer is considered an inactive student. To be readmitted, a PTS application form, from the PTS office in 107 Vasey Hall, must be completed. When the form is received, the record will be reviewed, and a letter sent to the applicant indicating readmission status.

DEGREES OFFERED

In October 2002, a new degree, the Bachelor of Interdisciplinary Studies was approved by the Villanova Board of Trustees. This degree is offered in the evening for Villanova adult students. As part of this degree, students will choose one of the following majors: General Studies, Information Systems, Leadership Studies or Media & Technology.

Villanova University also offers the following programs of study for the Bachelor's Degree which may be completed through Part-Time Studies: Accountancy, Business Administration, Computer Science, Education (Secondary Education, Teacher Certification), English, General Arts, History, and Human Services (some Liberal Arts majors may require taking courses in the day time schedule).

In addition to the Bachelor's degree, the following programs are available: Associate of Arts, Accountancy Certificate, Business Administration Certificate, Information Systems Certificate, Leadership Studies Certificate, Pre-Health Professions Science Certificate, and Secondary Teacher Certification.

DEGREE REQUIREMENTS

To qualify for the Bachelor's degree, a student must complete successfully the requirements for the degree as described in this *Catalog*. Villanova University reserves the right to change program requirements without prior notice.

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The Baccalaureate degree is awarded and a student is graduated when the curriculum prescribed by the University for one or more of the various degree programs has been satisfied.

In addition to the curricular requirements, candidates for graduation must meet the following requirements:

- A minimum final cumulative quality point average of 2.0.
- A minimum of half of all courses required for the degree earned at Villanova.
- A minimum of half of the requirements for the major degree program earned at Villanova.
- The final 30 credits (senior year) must be earned at Villanova.
- A minimum technical quality point average of 2.0 (science and business degrees).

Detailed information on all the following degree programs may be found in the specific College and Department sections of this *Catalog*; additional specific information may be obtained from the Part-Time Studies office.

BACHELOR OF INTERDISCIPLINARY STUDIES

The Bachelor of Interdisciplinary Studies offers majors in General Studies, Information Systems, Leadership Studies and Media & Technology. This degree was developed in conjunction with the College of Liberal Arts and Sciences and has the support of the Dean and faculty of that college. It is a Villanova degree in every respect and is grounded in the humanities as are all Villanova degree programs.

The Bachelor of Interdisciplinary Studies degree requires a total of 120 credits, with a core curriculum of 45 credits. This core curriculum provides more flexibility and choices so that adult students may select classes in line with their personal interests and experiences as well as their professional goals. The specified core curriculum applies only to the BIS degree program. Each major consists of 30-33 credits and the degree includes up to 42 credits of free electives depending on the major.

The combined Bachelor of Interdisciplinary Studies/Master of Science in Human Resource Development (BIS/MS) program for qualified BIS General Studies or Leadership Studies majors is designed to offer these students a planned educational track, in an abbreviated timeframe, that will prepare them for a career in the field of human resources. At the completion of their Junior year, these students may apply to the BIS/MS program. Students who are admitted into the BIS/MS track will be allowed to enroll in three graduate HRD courses during their senior year and all three courses will count toward both the BIS degree and the M.S. degree in Human Resource

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Development. The three courses are: PSY 8875 (Psychology of Organizational Change), PSY 8475 (Organizational Training), and HRD 8210 (Human Resource Planning).

The combined Bachelor of Interdisciplinary Studies in Information Systems (BIS/IS) and Masters in Software Engineering (MS/SE) is designed to offer qualified BIS/IS students a planned educational track that will have synergistic benefits for the existing BIS and MS programs alike. At the completion of their Junior year, qualified BIS Information System majors may apply to the BIS/MS integrated program. Students who are admitted to the BIS/IS – MS/SE track will enroll in three graduate level courses their senior year and all three will count toward both the BIS/IS degree and the MS/SE. The three courses are CSC 8490 (Database Systems) in place of CSC 4480 (Database Management), CSC 8540 (Software Engineering), and one additional pre-approved course. The BIS/MS Committee will review the third graduate level course for suitability.

BACHELOR OF INTERDISCIPLINARY STUDIES CORE CURRICULUM (45 CREDITS)

Humanities in Augustinian Tradition (3 courses; 9 credits)

ACS 1000	Traditions in Conversation	3
PHI 1050	Introduction to Philosophy	3
THL 1050	Christianity: Traditions and Transitions	3

Civic and Ethical Leadership (3 courses; 9 credits)

ETH 2050	Ethical Tradition	3
American Perspectives: PSC, ECO, SOC, HIS		3
Global Perspectives: PSC, ECO, SOC, HIS		3

Communication and Writing Skills (2 courses; 6 credits)

COM 1100	Public Speaking	3
ENG 1050	The Literary Experience	3

Cultural Appreciation (2 courses; 6 credits)

Fine Arts		3
Modern Language/Culture, Theatre, Film, Literature		3

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Quantitative and Scientific Literacy (2 courses; 6 credits)

Natural Science		3
MAT 1260		3

Core Electives (3 courses; 9 credits)

Advanced Courses:	Advanced courses in these subjects must be numbered 2000 and above.	
History, Philosophy, Theology, English, Communication, Fine Arts, Social Science		3 3 3

BACHELOR OF INTERDISCIPLINARY STUDIES/GENERAL STUDIES MAJOR (33 CREDITS)

Students with a major in General Studies must take advanced courses in one of the following areas: Humanities, Social Sciences, or Independent General Studies (self-defined academic program). Humanities Area: Art History, Classical Studies, Communication, Education, English, French, German, History, Peace and Justice, Philosophy, Spanish, Theology, Theatre. Social Sciences Area: Economics, Geography, Political Science, Psychology, Sociology.

ELECTIVES (42 CREDITS)

With the reduced core curriculum and number of electives available in the Bachelor of Interdisciplinary Studies degree program, there is the opportunity for BIS students to complete significant coursework outside their major which would complement and enhance their academic studies. Examples of these academic discipline areas may include, but are not limited to, Information Systems, Leadership Studies, Business, and Communication.

BACHELOR OF INTERDISCIPLINARY STUDIES/INFORMATION SYSTEMS MAJOR

Information Systems (10 courses; 32 credits)

CSC 1020	Computers and the Web	3
CSC 1051	Algorithms and Data Structures I	4
CSC 1052	Algorithms and Data Structures II	4
CSC 2400	Computer Systems I	3
CSC 1300	Discrete Mathematics	3
CSC 2500	Survey of IS Environments	3
Systems Analysis	MIS 2040 (Systems Analysis & Design) OR CSC 4700 (Software Engineering)	3
Databases	MIS 2030 (Database Management) OR CSC 4480 (Principles of Database Systems)	3
CSC 4710	Information Systems Project Management	3
CSC 4797	Information Systems Capstone	3

Information Systems Environment (5 Courses; 15 Credits)

Examples of Application Areas Include:

CSC 2020	Web Development & Technologies I	3
CSC 2025	Web Development & Technologies II	3
CSC 3070	Emerging Technology Trends	3
CSC 3080	Information Security and Protection	3
MIS 3020	Enterprise Systems and Application	3
CSC 2053	Algorithms and Data Structures III	3
Data Communications	CSC 4900 (Computer Networks) OR MIS 3010 (Business Data Communication)	
MIS 3030	Enabling Technology in E-Business	3
CSC 1600	Operating Systems	
CSC 4490	Data Warehousing and Mining	
ECE 5477	Computer Communications Security	

Electives (30 credits)* With the reduced core curriculum and number of electives available in the Bachelor of Interdisciplinary Studies degree program, there is the opportunity for BIS students to complete significant coursework outside their major which would complement and enhance their academic studies. Examples of these

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academic discipline areas may include, but are not limited to, Leadership Studies, Business, and Communication.

*MAT 1320 (Calculus I) is highly recommended for all students seeking to attend graduate school.

BACHELOR OF INTERDISCIPLINARY STUDIES/LEADERSHIP STUDIES MAJOR (30 CREDITS)

LDR 2000	Foundations of Leadership	3
LDR 2010	Strategic Planning for Leaders	3
LDR 2020	Leadership and Community	3
LDR 2030	Leadership and Technology	3
LDR 2040	Ethics and Leadership	3
PSY 2700	Industrial/Organizational Behavior	3
COM 3490	Organizational Communication	3
COM 3490	Leadership in a Borderless Economy	3
COM 3490	Negotiation and Decision Making	3
LDR 5000	Leadership Capstone Course	3

Electives (45 credits) With the reduced core curriculum and number of electives available in the Bachelor of Interdisciplinary Studies degree program, there is the opportunity for BIS students to complete significant coursework outside their major which would complement and enhance their academic studies. Examples of these academic discipline areas may include, but are not limited to, Information Systems, Bachelor of Interdisciplinary Studies/Leadership Studies Major (30 credits)

BACHELOR OF INTERDISCIPLINARY STUDIES/MEDIA & TECHNOLOGY MAJOR (36 CREDITS)

CSC 1020	Computing & the Web	3
CSC 1040	Computing with Images	3
CSC 2020	Web Development & Technologies I	3
CSC 2025	Web Development & Technologies II	3
CSC 3070	Emerging Technologies	3
Databases	MIS 2030 Database Management <i>or</i> CSC 4480 Principles of Database Systems	3
CSC 4710	Info. Systems Project Management	3
MIS 3030	Enabling Technology in E-Business	3
MKT 2290	Interactive Marketing	3
COM 2340	Theories of Visual Communication & Culture	3
COM 3353	Media & Technology	3
COM 2300	Theories of Mass Communication	3

Electives (39 credits)* With the reduced core curriculum and number of electives available in the Bachelor of Interdisciplinary Studies degree program, there is the opportunity for BIS students to complete significant coursework outside their major which would complement and enhance their academic studies. Examples of these academic discipline areas may include, but are not limited to, Information Systems, Business, and Communication.

* MAT 1320 (Calculus I) is highly recommended for all students seeking to attend graduate school.

BACHELOR OF ARTS/BACHELOR OF SCIENCE

Students in the Bachelor of Arts program in Part-Time Studies may major in Education, English, History, Human Services, or General Arts. The degree requirements may be found under the departmental listings contained in this Catalog. Within the Bachelor of Arts degrees, minors are available in Business, Communication, Computer Science, Education, English, History, Human Services, Philosophy, Political Science and Sociology.

The Core Curriculum of the College of Liberal Arts and Sciences is applicable to these majors offered in Part-Time Studies: Bachelor of Arts in General Arts, English, History, and Human Services; and Bachelor of Science in Computer Science and

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Education. A description of the Core Curriculum may be found in the College of Liberal Arts and Sciences section of this *Catalog*. For the Bachelor of Arts Degree in General Arts, General Arts with a Business Minor, English, History, and Human Services, 40 courses and a minimum of 122 credits are required. For the Bachelor of Science in Computer Science, 41 courses and a minimum of 129 credits are required. For the Bachelor of Science in Education, course and credit requirements vary according to the subject area of certification. The twelve subject areas available for certification are: Biology, Chemistry, Communication, English, French, General Science, German, Latin, Mathematics, Physics, Social Studies, and Spanish. Required courses in some subject areas, including student teaching, are available during day times only. *Day classes are billed at the day tuition rates.*

ASSOCIATE OF ARTS

The Associate of Arts Degree program is designed for students who are not seeking a baccalaureate degree but still wish to follow a specific curriculum. The Associate of Arts Degree program may be completed in half the time it normally takes to complete the baccalaureate program. The program requires 20 courses and a minimum of 60 credits. At least half of the credits (30) must be taken at Villanova. A 2.0 cumulative GPA is required to attain the A.A. Students completing the program with a 2.0 average may continue toward the Bachelor of Arts without loss of credit.

Subject	Credits
ENG 1050	3
Foreign Language 1121, 1122	6
HIS 1050	3
Mathematics/Natural Science (3 courses; 10 credits)	10
ACS 1000, 1001 Augustine and Culture Seminars	6
PHI 1050	3
THL 1050	3
ETH 2050	3
Fine Arts (1 course; 3 credits) Designated Courses Only	3
Social Science (1 course; 3 credits)	3
Free Electives (6 courses; 18 credits)	18

BACHELOR OF SCIENCE IN ACCOUNTANCY

The B.S. in Accountancy requires a minimum of 41 courses and 125 credits. Details are to be found in the Villanova School of Business section of this Catalog.

BACHELOR OF BUSINESS ADMINISTRATION

The Bachelor of Business Administration requires a minimum of 41 courses and 125 credits. The following courses are required.

FRESHMAN YEAR

<i>Courses</i>	<i>credits</i>	<i>Courses</i>	<i>Credits</i>
MIS 1006	3	ENG 1010	3
ECO 1001, 1002	6	MAT 1500, 1505	8
PHI 1050	3	ACS 1000, 1001	6
BL 1090	3		

SOPHOMORE YEAR

ACC 1101, 1102	6	VSB 2005	3
Social Science ¹	3	HISTORY ²	3
COM 1101	3	THL 1050	3
ENG 1050	3	Free Elective	6
ETH 2050	3		

¹Social Science: choose from Geography, Sociology, Political Science, Psychology.

²History: choose from any course in the department.

JUNIOR YEAR

FIN 1113	3	Major Courses	6
MGT 1102	3	Natural Science ³	3
DIT 1141	3	Non-business Electives ⁴	6
MKT 1137	3		
ECO 3109	3		

³Natural Science: choose from AST, BIO, CHM or PHY.

⁴Accounting majors take a third required accounting course during the junior year in place of a non-business elective course.

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SENIOR YEAR

Humanities ⁵	3	THL Elective	3
Major courses ⁶	12	Social/Natural Science ⁷ /History Elective	3
MGT 3301	3	Free Electives	6

⁵Humanities: choose from Art History, Classical Studies, English, Modern Languages, Philosophy or Theatre.

⁶Accounting majors: it is recommended that BL 2185 be substituted for one free elective.

⁷Choose from Geography, Political Science, Psychology, Sociology, Natural Sciences, or History.

CERTIFICATE PROGRAMS

Several certificate programs are available through Part-Time Studies. Certificate programs are designed for individuals who already have bachelor's degrees but wish to develop expertise in a particular area. The following programs are available:

Accountancy Certificate. The Accountancy Certificate is designed to allow individuals who possess bachelor's degrees in General Arts or other non-business majors to acquire expertise in accounting. Besides providing an educational opportunity for persons interested in securing careers in accounting in a diversity of environments in industry, business and government, 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 24 accounting credits which the state of Pennsylvania currently mandates as the minimum requirement to sit for the 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. Eight courses must be completed: ACC 1101, 1102, 2310, 2320, 2430, 2450, 2460, and 2470. Students are required to have any prerequisite courses necessary (indicated in the course description) for any particular course in the certificate program. A maximum of 2 courses, specifically Principles of Financial Accounting and Principles of Managerial Accounting, will be allowed in transfer. All remaining upper-level courses in the certificate program must be completed at Villanova. *Students may substitute ACC 2340 for ACC 2470.*

Business Administration Certificate. The Business Administration Certificate provides business-related knowledge and skills and is especially useful to individuals with bachelor's degrees in General Arts or other non-business majors who wish to acquire expertise in business areas. The program also meets the needs of individuals who work

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in smaller businesses or who are self-employed. *To be eligible for this certificate, a student must possess a bachelor's degree from an institution accredited by the appropriate regional accrediting association.*

Eight courses must be completed: four specifically required and four electives from the approved list of electives, which represent more advanced treatments of the required courses. Students are required to have any prerequisite courses necessary (indicated under the course description) for any particular course in the certificate program. A maximum of 2 courses (6 credits) will be allowed in transfer. No other course substitutions will be permitted.

The *required courses* are: ACC 1101, 1102; ECO 1001 or 1002; MGT 1102;

The *elective courses* must be chosen from the following:

ACC 2310, 2320, 2340, 2430, 2450, 2460, 2470,
BL 1090, 2135, 2150, 2170, 2185
DIT 1141, 2006, 2010,
ECO 1001 or 1002 (the one not taken for the required course) 2110, 3106,
FIN 1113, 2323
MGT 2153, 2155
MKT 1137, 2220, 2225, 2277, 2280

Information Systems Certificate. The Information Systems Certificate is designed to help acquire related information systems knowledge and skills through a broad selection of coursework. It is for individuals who wish to have a more formal grounding in the application of information technology and for those who want to understand the information demands on business and society. It is especially useful for students who have already completed course work in business or liberal arts and who wish to acquire a formal understanding of the application of information technology.

To receive a Certificate in Information Systems from Villanova University, six courses must be completed: four are specifically required, and two are chosen from the approved list of electives.*

The *required courses* are: CSC 1020/MIS 1006, CSC 1051, MIS 2030/CSC 4480, MIS 2040/CSC 4700

The *elective courses* must be chosen from the following: CSC 2020, CSC 2025, CSC 2400, CSC 1052, CSC 4710, CSC 3070, CSC 3080, CSC 2500, MIS 3020, MIS 3030

*Students are required to have any prerequisite courses necessary (indicated in the University Catalog) for any particular course in the certificate program.

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Leadership Studies Certificate. The Leadership Studies Certificate 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. While providing an educational opportunity for individuals interested in securing careers in management in a diversity of environments, the program also meets the needs of those who work in smaller businesses or who are self-employed. 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 receive a Certificate in Leadership Studies from Villanova University, five courses must be completed: two are specifically required, and three are chosen from the approved list of electives.

The *required courses* are: LDR 2000 and LDR 2010.

The *elective courses* must be chosen from the following:

LDR 2020, LDR 2030, LDR 2040

PSY 2700

COM 3490 (Organizational Communication) COM 3490 (Leadership in a Borderless Economy)

COM 3490 (Negotiation and Decision Making)

Pre-Health Professions Science Certificate. This certificate program was created to provide a fundamental education in the sciences that can lead to entrance into schools of the health professions and to a wide array of careers. Interested students are strongly encouraged to check the admissions requirements for individual schools and programs relating to the health professions.

To receive a Certificate in Pre-Health Professions Science from Villanova University, eight required courses must be completed. BIO 2105, BIO 2106, CHM 1151/1103, CHM 1152/1104, CHM 2211/2201, CHM 2212/2202, PHY 1100/1101, PHY 1102/1103.

A maximum of two courses (no more than 10 credits) which have been completed within the last five years may be transferred.

Secondary Teacher Certification. Students who possess a Bachelor's degree and want to pursue Teacher Certification on a part-time or full-time basis should apply through the Office of Part-Time Studies. The twelve subject areas which can be pursued at Villanova are: Biology, Chemistry, Communication, English, French, General Science, German, Latin, Mathematics, Physics, Social Studies, and Spanish. Details on Secondary Teacher Certification can be found in the College of Liberal Arts and Sciences section of this catalog.

NON-MATRICULATED AND POSTGRADUATE STUDENTS

A student may enroll in Part-Time Studies without seeking a degree. Such students are classified as *non-matriculated students or postgraduate students*.

Postgraduate students are students who have already earned a bachelor's degree and are not seeking a second degree but merely taking undergraduate courses. These students are free to enroll in day or evening classes at Villanova through Part-Time Studies. Available space in day classes, however, may restrict their curricular options.

Non-matriculated students have not yet earned a bachelor's degree but seek to take college courses for a variety of reasons. Such students include those who:

- ❑ Want to take college courses to develop a particular expertise or for purposes of personal enrichment.
- ❑ Have applied for degree status but with current academic records have not been accepted. Such students may need to remedy deficiencies or establish their academic qualifications before applying or reapplying for degree programs. The conditions to be met before their records will be reevaluated are specified in the letter from the PTS Admissions Office.
- ❑ Have applied for degree status, but the credentials presented have been inadequate to enable the Admissions Committee to render a positive decision. These students are generally advised to pursue, as non-matriculated students, the program for which they requested admission, and to compile at least 18 credits, thus demonstrating their ability to complete the program requirements. After the students complete the 18 credits, they may request reevaluation.

Non-matriculated students or postgraduate students who wish to change to matriculated status must apply and complete the appropriate request form in the Part-Time Studies office. Students will be responsible to see that the PTS Admissions Committee has all necessary credentials for consideration of their requests (See the section on Admission, above).

Generally, non-matriculated students are urged to request degree status if possible rather than accumulate a large number of credits without any specific goals. Thirty credits should be taken as a guide in this regard.

Non-matriculated and postgraduate students must maintain good academic standing by carrying at least a 2.00 cumulative quality point average.

CONTINUING STUDIES PROGRAMS

(www.continuingstudies.villanova.edu)

The Continuing Studies division offers in-class professional development and certificate programs to approximately one thousand (1,000) students each year. Courses (and certifications) are offered in a variety of subject areas: human resource management (PHR, SPHR, GPHR), payroll administration (FPC, CPP) project management (PMP), fundraising (CFRE), english as a second language, treasury management (CPT), management accounting (CMA), internal auditing (CIA), supply chain management (SPSC), and alcohol and drug counseling (CAC). The courses are offered on campus and at various corporate sites throughout the tri-state area. Continuing Studies also provides training opportunities at corporate and non-profit worksites.

The Continuing Studies Paralegal Certificate Program is designed to train qualified individuals in the theory and philosophy of the law and the ethics of legal practice. Student gain the necessary practical skills to enable them to effectively assist lawyers and executives in providing a wide range of legal services to corporations, governmental agencies, law firms and businesses. The Paralegal Program is approved by the American Bar Association (ABA).

In addition, the Continuing Studies Office, in partnership with BISK Education, offers Project Management, Human Resources, Six Sigma and a variety of non-credit certificate programs via distance learning to approximately twelve thousand (12,000) students a year.

For more information on these programs, contact the Office of Continuing Studies at 610-519-4310. The Continuing Studies Office is located on the Ground Floor of Stanford Hall.

FLEXIBLE ENROLLMENT OPTIONS

FASTFORWARD AT VILLANOVA

Villanova's FastForward courses are designed to help adult students move forward quickly toward graduation. These courses are scheduled on seven Saturday mornings or afternoons and weekday evenings, for a class period of 3 1/2 hours, and are supplemented with on-line instruction. FastForward 1 is held from late August till the middle of October, FastForward 2 from mid-October to mid-December, FastForward 3 from mid-January through late February, and FastForward 4 from March to late April. FastForward courses may also be available on weekday evenings.

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Each course can be completed in only half a semester but is a complete three-credit class with fewer on campus class hours. Additionally, the Part-Time Studies FastForward Track allows adult students to complete three courses during the fall and spring semesters—two back-to-back FastForward courses and one, one-night a week course—while never taking more than two classes at one time.

VARIABLE COURSE LOAD

Students can vary the number of courses taken each semester, depending on their professional and personal demands. An average course load for many part-time students is two per semester. By utilizing our FastForward courses, students may take a total of four courses in a semester: two during the regular semester, and one in each of the FastForward sessions. Students who take four courses in fall, four in spring, and two in the summer, will complete ten courses per year (the same amount as a full-time day student). Additionally, students who enter with 60 credits may take advantage of the FastForward Track which makes it possible to complete the Bachelor of Interdisciplinary Studies degree program in three years.

EVENINGS/WEEKENDS

Students can choose classes that meet one night a week for 14 weeks, on Saturdays for seven weeks with additional online instruction (FastForward), or on Friday nights and Saturdays (one credit psychology seminars which are offered during the fall semester and summer session).

SUMMER SESSION

Students who wish to quicken the pace of their degree program can continue studies year-round by attending summer classes. Villanova offers an eight-week summer evening session that runs from the end of May through the end of July.

DISTANCE EDUCATION

Because technology is an integral part of the modern college classroom, Villanova University also offers fully online classes during Summer Session as well as during the academic year.

ACADEMIC AND STUDENT POLICIES AND INFORMATION

With the exceptions and specifications listed below, students in Part-Time Studies are governed by the same regulations and policies that apply to students in the four undergraduate Villanova Colleges. See the general University section and the individual college sections of this *Catalog* for further information on all the following. *NOTE: it is the responsibility of the student to know and observe all academic policies and regulations. Such policies may change without prior notice.*

ACADEMIC STANDING

To qualify for a bachelor's degree, a candidate must earn a cumulative quality point average of at least 2.00. Part-Time Studies students who wish to take courses in the day sessions must also maintain a 2.00 cumulative quality point average. A student's record will be submitted to the Academic Standing Committee for appropriate action (ranging from probation to dismissal) if the average has fallen below 2.0. If a student is placed on probation their course load may be restricted, and they must achieve a specified grade point average in that semester in order to continue to be eligible for enrollment.

ADDRESS CHANGES

Important mailings are sent to students throughout the academic year. It is essential that all students keep the PTS office informed of any change in their permanent home address and/or mailing address. Otherwise, we cannot be responsible for students not receiving material through the mail. Change of Address forms are available in the PTS office, 107 Vasey Hall. Students must check their Villanova email and Novasis accounts for information from the Registrar and other offices. Important dates and information are also listed on the Part-Time Studies website at www.parttime.villanova.edu.

ADVANCED ACADEMIC CREDIT

In addition to the provisions for advanced academic credit listed in each College's section of this *Catalog*, Part-Time Studies students may gain credit by examination by means of the College Level Examination Program (CLEP) administered through 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 maximum of 60 transfer credits, which could include CLEP credits and credits from other colleges or universities, may be accepted toward a degree program. A score of 60 or higher on an approved Subject Examination will be considered for credit. For further information, students should contact the Part-Time Studies office.

ADVISING

The Director and Associate Director of Part-Time Studies are responsible for academic advising. They are available during evening or daytime hours. Appointments in the office or via telephone may be arranged through the Part-Time Studies office (610/519-4300).

Accountancy	Mr. James Johnson/Ms. Mary Bustamante
Accountancy Certificate	Ms. Mary Bustamante
BIS/General Studies	Mr. James Johnson/Ms. Mary Bustamante
BIS/Information Systems	Mr. James Johnson/Ms. Mary Bustamante
BIS/Leadership Studies	Mr. James Johnson
BIS/Media & Technology	Mr. James Johnson/Ms. Mary Bustamante
Business Administration	Mr. James Johnson/Ms. Mary Bustamante
Business Administration Certificate	Ms. Mary Bustamante
Communication	Dr. Bryan Crable
Computer Science	Dr. Georgi Japaridze
Education, Teacher Certification	Dr. John Durnin
English, Liberal Arts, History	Mr. James Johnson/Ms. Mary Bustamante
Human Services	Dr. Beverly Kahn
Non-Matriculated and Assoc. of Arts	Mr. James Johnson/Ms. Mary Bustamante
Postgraduates	Mr. James Johnson/Ms. Mary Bustamante

Each student is assigned an academic advisor who may be contacted for assistance in making those decisions that affect academic goals. The student should consult with an advisor at least once a semester to insure proper course selection and advancement in his program. *Note: Although advisors will do all they can to assist students, the students themselves are responsible for securing accurate and timely information about policies and procedures affecting their academic programs, for understanding the requirements of degree programs they choose, for planning for the orderly fulfillment of those requirements, and for keeping accurate records of their academic progress and transactions.* Additional information and policies may be found in the University section and in the individual college sections of this *Catalog*.

AUDITING

Students who are not working for college credits may enroll for audit status with the consent of the Director of Part-Time Studies and the student's academic advisor. Additional information may be found in other sections of this catalog.

CHANGE OF DEGREE PROGRAM

A student who wishes to change degree programs must request the change on a form available in the Part-Time Studies office.

CLASS STATUS

Matriculated students (those who have been accepted into a bachelor's degree program) with under 30 credits *completed* are considered Freshmen; with 30-59 credits, Sophomores; with 60-89 credits, Juniors; and with 90 credits or more, Seniors.

DEAN'S LIST

To be included on the Dean's List, a student must be matriculated in a degree program, must achieve a 3.5 GPA, and must carry at least 6 credits per semester, none of which can be a satisfactory/unsatisfactory course. Letters of congratulations are mailed to each student who achieves this high honor. If a student so desires a letter can also be sent to his or her employer. The Dean's List pertains to the fall and spring semesters.

DROP AND ADD

Students may make changes in their schedules during the Drop and Add period -- the first five class days of each semester. To eliminate a course, add a course, or both, a student must obtain a drop/add form in the PTS office, complete the information, and secure the academic advisers signature. To change only evening courses, the student may leave the form in the PTS office. To change day courses, students must take the completed and signed form to the Registrar's Office or on-line, via Novasis. The Registrar's Office then will send a revised copy of the schedule. If the information is not accurate, the student should contact the PTS office for assistance. *NOTE:* In order not to be charged for a class, it must be dropped officially from the schedule *before* the start date of classes listed in the Academic Calendar.

FINANCIAL PLANNING

Villanova offers several easy-payment options to our students as well as payment by Discover, Visa or MasterCard. Students may also elect to use an alternate payment plan, for a small fee, whereby they pay their tuition in scheduled increments over the course of the semester.

Another valuable resource for students can be their employers, many of whom will pay tuition for their employees who attend Villanova. Students who are employed either

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full or part-time should check their company's policy and take advantage of that benefit if it is available to them.

The Villanova Tuition Employer Billing Plan is an agreement between the employer of a Villanova student and Villanova University. With this agreement, the employer guarantees that Villanova will receive tuition re-imbursement payments for the employee and in turn, Villanova will bill the employer, not the individual student. Villanova has a variety of employers who take advantage of this plan for their employees.

A list of scholarships, local and national, for adult part-time students is available in the PTS office or on line at www.parttime.villanova.edu.

GRADUATION APPLICATION

A student who expects to receive a degree is required to make official application for the degree no later than November 1 for May completion, April 1 for September completion, and August 1 for December completion. *A prospective graduate card* can be obtained from the Part-Time Studies Office or on the Part-Time Studies website. *This is an extremely important procedure.* The student's advisor will review his or her record and verify the completion of all graduation requirements.

PARKING

Parking permits may be purchased at the Department of Public Safety (Farrell Hall, 824 Lancaster Avenue). Instructions for web based parking registration may be found at publicsafety.villanova.edu/parking.html. Further information is available from the University Parking Office (610/519-6990). All students who utilize Villanova parking lots must have a current parking permit.

PERSONAL SAFETY

Students are requested to report all *Crimes* and *Emergencies* immediately to the Department of Public Safety (610-519-4444). Individuals who desire an escort or other assistance should call 610/519-6979.

REGISTRATION

All new students who have been accepted by Part-Time Studies and currently enrolled students in good standing are eligible for registration. It is the student's responsibility to see that they select courses in accordance with the requirements of their program and in consultation with their academic advisor.

Part-Time Studies

Students are encouraged to register early, whether in person, via Novasis, by mail, or by *Fax*. Further information may be obtained from the fall or spring brochures, summer catalog, the Part-Time Studies web site at www.parttime.villanova.edu, or by contacting the Part-Time Studies office.

NEW STUDENT ORIENTATION AND ADDITIONAL SUPPORT

Part-Time Studies offers assistance to help students become acquainted with the resources on campus and to aid in the transition to academic life. All of these resources are now available to part-time students via the PTS website at parttime.villanova.edu. Information is also always available through the Part-Time Studies Office in Vasey Hall, 107.

STUDENT ACTIVITIES

Villanova offers approximately 150 different student organizations which fall under the jurisdiction of the Office of Student Development, located in 214 Dougherty Hall, 610/519-4210. For information on the various groups, visit or contact that office. PTS students are allowed to participate in any activity on campus except a varsity level sport.

The *NiteLine*, the newspaper published for PTS students, serves as a vehicle for disseminating news of interest to the Part-Time Studies student body.

TRANSFER OF CREDITS

Transfer provisions are described under “Admissions” in the University section of this *Catalog*. Applications for transfer into Part-Time Studies should be made in the Part-Time Studies Office. PTS students who wish to take courses at other institutions should seek the approval of the Director or Associate Director of PTS as to the particular institution they wish to attend and as to the particular course(s) they wish to take.

UNIVERSITY SENATE

The University Senate, an advisory group to the University President and the Board of Trustees, includes representation from Part-Time Studies. Junior class standing is a requirement for eligibility to serve as the Part-Time Studies representative. Students who may be interested in serving in the Senate should contact the Director, Part-Time Studies.

WITHDRAWAL FROM A COURSE

After the drop/add period, which is the first week of classes, any student who is unable to complete a course and wishes to terminate attendance in that course must do so through the official withdrawal procedure. *Discontinuance of attendance or notice to the instructor does not constitute official withdrawal.*

Students are required to notify the Part-Time Studies office promptly, either in writing or by completing the appropriate form in the Part-Time Studies office. A phone call to the PTS office is not acceptable. If the student withdraws in person, the date on the form will be considered the official withdrawal date. If the student withdraws via letter, the postmark date on the letter will be considered the official withdrawal date.

After the last date for Authorized Withdrawal, approximately three and one-half weeks after mid-term break, a student may petition for withdrawal without penalty only for valid reasons. To do so, a student must submit a signed Request for Authorized Withdrawal, signed by the professor and/or laboratory instructor, along with the standard form for the Dean's review.

If a student is granted the Authorized Withdrawal, the course remains on his transcript but the designation WX will appear in the grade column. WX signifies that the withdrawal was approved, and there is no grade given or calculated for that course. A student who leaves class without officially withdrawing will continue to incur absences and will receive the final grade of Y (unauthorized withdrawal) which is calculated as an F in the grade point average.

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- MARCIA COSTELLO, 1984; B.S., 1977, University of Rhode Island; M.S., 1980, Framingham State College; Ph.D., 1995, Temple University. *Assistant Professor, Nursing*
- JESSE D. COUENHOVEN, 2005; B.A., 1995, Oberlin College; M.A.R., 1997, Yale Divinity School; M.A., 2002, M.Phil., 2002, Ph.D., 2004, Yale University. *Assistant Professor, Humanities*
- WILLIAM A. COWEN, IV, 2002; B.A., 1997, M.A., 1999, Rowan University. *Instructor, Communication*
- R. BRYAN CRABLE, 1998; B.A., 1992, M.A., 1995, Ph.D., 1998, Purdue University. *Associate Professor, Communication*
- DAVID A. CREGAN, O.S.A., 2004; B.A., 1989, Villanova University; M. Div., 1999, Washington Theological Union; M.A., 2000, The Catholic University of America; M. Phil., 2001, Ph.D., 2004, Trinity College. *Assistant Professor, Theatre*
- CHRISTINE M. CRUMLISH, 1989; B.S.N., 1974, Villanova University; M.S.N., 1978, University of Pennsylvania; Ph.D., 1989, New York University. *Assistant Professor, Nursing*
- RAYMOND L. CUMMINGS, 1949; A.B., 1948, Villanova University; M.A., 1952, Georgetown University; Ph.D., University of Pennsylvania, 1964. *Professor Emeritus, History.*
- ROBERT L. CURRY, 1991; A.B., 1979, Dartmouth College; M.Sc., 1981, Ph.D., 1987, University of Michigan. *Professor, Biology*
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- JAMES M. DANKO, 2005; B.A., 1979, John Carroll University; M.B.A., 1992, University of Michigan. *The Helen & William O'Toole Endowed Dean, Villanova School of Business*
- PAUL DANOVE, 1994; B.S., 1974, University of New Orleans; M.Div., 1986, S.T.L., 1990, Jesuit School of Theology at Berkeley; Ph.D., 1991, Graduate Theological Union. *Professor, Theology and Religious Studies*
- ALICE A. DEANIN, 1983; S.B., 1975, Massachusetts Institute of Technology; M.S., 1977, University of Illinois; Ph.D., 1983, University of Maryland. *Assistant Professor, Mathematical Sciences*
- ROBERT H. DeFINA, 1989; B.A., 1975, Rutgers University; M.A., 1977, Ph.D., 1979, Washington University. *Professor, Sociology & Criminal Justice*
- STERLING F. DELANO, 1970; B.S., 1965, Villanova University; M.A., 1967, Northeastern University; Ph.D., 1974, Southern Illinois University. *Professor Emeritus, English*
- JOSE R. DE LA VEGA, 1961; Doctor in Chemistry, 1948, University of Havana (Cuba). *Professor Emeritus, Chemistry*
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- MARY E. DESMOND, 1977; B.A., 1963, Marquette University; M.A., 1971, Ph.D., 1973, University of Colorado. *Professor, Biology*
- WILLIAM DESMOND, 2005; B.A., 1972, M.A., 1974, National University of Ireland; Ph.D., 1978, Pennsylvania State University. *David R. Cook Visiting Endowed Chair in Philosophy*
- ROBERT DeVOS, 1966; B.S., 1963, St. Peter's College; M.A., 1965, University of Pennsylvania; Ph.D., 1972, Lehigh University. *Associate Dean, College of Arts and Sciences; Professor, Mathematical Sciences*
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- EDMUND J. DOBBIN, O.S.A., 1987; A.B., 1958, Villanova University; M.A., 1962, Augustinian College; M.S., 1964, S.T.L., 1968, The Catholic University of America; S.T.D., 1971, University of Louvain, Belgium. *President Emeritus; Professor, Theology and Religious Studies*
- JONATHAN P. DOH, 2001; B.A., 1982, State University of New York – Plattsburgh; M.A., 1986, State University of New York at Albany; Ph.D., 2001, George Washington University. *Herbert G. Rammrath Endowed Chair in International Business; Director, Center for Global Leadership; Professor, Management & Operations*
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- NORMAN R. DOLLAHON, 1973; B.S., 1966, M.S., 1968, University of New Mexico; Ph.D., 1971, University of Nebraska. *Associate Professor, Biology*
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- JOHN A. DOODY, 1969; B.A., 1965, La Salle College; Ph.D., 1974, University of Notre Dame. *Robert M. Birmingham Endowed Chair in Core Humanities; Associate Dean for First Year Studies; Director, Villanova Center for Liberal Education; Professor, Philosophy*
- MARK DOORLEY, 1997; B.A., 1984, St. Alphonsus College; M.Div., 1988, Washington Theological Union; Ph.D., 1994, Boston College. *Director, Ethics Program*
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- MARITA E. FRAIN, 1980; B.S.N., 1969, Villanova University; Ed.M., 1973, Teachers College, Columbia University. *Assistant Professor, Nursing*
- JESSE C. FREY, 2005; B.A., B.S., 1996, Presbyterian College; M.S., 2000, The University of North Carolina; M.S., 2004, Ph.D., 2005, The Ohio State University. *Assistant Professor, Mathematical Sciences*
- JOHN D. FRIEDE, 1972; B.S., 1963, St. Benedict's College; M.S., 1965, University of New Mexico; Ph.D., 1970, University of Minnesota. *Assistant Professor, Biology*
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- RUSSELL M. GARDNER, 1982; B.S., 1969, M.A., 1971, California State University; Ph.D., 1975, Indiana University. *Professor, Biology*
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- JOSEPH GEORGE, JR., 1959; A.B., 1951, A. M., 1952, Ph.D., 1959, Boston University. *Professor Emeritus, History*
- KATHRYN A. GETEK, 2008; B.A., 1999, Princeton University; M.A., 2003, Weston Jesuit School of Theology; Ph.D., 2009, Boston College. *Post Doctoral Fellow, Ethics Program*
- JUDITH A. GIESBERG, 2002; B.A., 1988, Trinity University; M.A., 1993, Ph.D., 1997, Boston College. *Associate Professor, History*
- JENNIFER K. GILBERT, 2008; B.S., 1999, State University of New York at Buffalo; M.S., 2002, University of Connecticut; Ph.D., 2008, University of Delaware. *Post Doctoral Fellow, Geography & the Environment*
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- ALAN D. GLUCHOFF, 1981; B.S., 1975, Massachusetts Institute of Technology; M.A., 1977, Ph.D., 1981, University of Wisconsin-Madison. *Professor, Mathematical Sciences*
- EDWARD F. GLYNN, 1983; B.C.E., 1969, Villanova University; M.S.C.E., 1972, Northeastern University; Ph.D., 1979, Massachusetts Institute of Technology; P.E. (MA, PA). *Assistant Professor, Civil and Environmental Engineering*
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- DON GOELMAN, 1968; B.A., 1964, Ph.D., 1971, University of Pennsylvania. *Associate Professor, Computing Sciences*
- EDWIN L. GOFF, 1970; B.A., 1967, Vanderbilt University; M.A., 1968, Ph.D., 1974, Boston College. *Associate Dean for the Honors Program and Undergraduate Grants and Awards; Associate Professor, Philosophy*
- EDMUND R. GOODE, 2007; A.B., 1996, Columbia University; M.A., 2003, Cornell University. *Pre-Doctoral Fellow, English*
- MARK GRAHAM, 2000; B.A., 1988, St. Ambrose University; M.A., 1992, St. Mary's Seminary and University; Ph.D., 2000, Boston College. *Associate Professor, Theology and Religious Studies*
- AMANDA M. GRANNAS, 2005; B.S., 1998, Juniata College; Ph.D., 2002, Purdue University. *Assistant Professor, Chemistry*
- KATHY GRAY-SIRACUSA, 2006; B.S.N., 1984, M.S.N., 1988, Syracuse University; Ph.D., 2005, University of Maryland. *Assistant Professor, Nursing*
- KAREN M. GRAZIANO, 2004; B.A., 1993, Fairfield University; J.D., 1995, American University. *Assistant Professor, English*
- JUSTIN J. GREEN, 1971; Sc.B., 1948, Brown University; Ph.D., 1970, Syracuse University. *Professor Emeritus, Political Science*
- SHAWN P. GROSS, 1999; B.S.E. (Civil), 1993, Tulane University; M.S.E. (Civil), 1995, Ph.D. 1998, University of Texas at Austin. *Associate Professor, Civil and Environmental Engineering*
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- MARGARET M. GRUBIAK, 2007; B.S., 1999, University of Minnesota; M.A., 2002, Ph.D., 2006, University of Virginia. *Assistant Professor, Humanities*
- EDWARD F. GUINAN, JR., 1969; B.S., 1964, Villanova University; Ph.D., 1970, University of Pennsylvania. *Professor, Astronomy and Astrophysics*
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- CHRISTOPHER HAAS, 1988; B.A., 1978, The University of Kansas; M.A., 1981, Wheaton College; M.A., 1983, Ph.D., 1988, University of Michigan. *Associate Professor, History; Associate Professor, Classical Studies*
- JUDITH M. HADLEY, 1990; B.A., 1977, Wheaton College; M.A., 1984, Institute of Holy Land Studies (Israel); Ph.D., 1989, Cambridge University (England). *Associate Professor, Theology and Religious Studies*
- JEFFREY W. HAHN, 1971; B.A., 1966, University of Pennsylvania; M.A., 1969, Ph.D., 1971, Duke University. *Professor Emeritus, Political Science*
- MAURICE L. HALL, 2004; B.A., 1983, University of the West Indies; Cert. journalism, 1990, University of Westminster (UK); M.A., 1992, Ph.D., 1997, Howard University. *Assistant Professor, Communication*
- MASAKO HAMADA, 1989; B.A., 1970, Shirayuri Women's College (Tokyo); M.S., 1985, University of Pennsylvania; Ed.D., 2002, Columbia University. *Associate Professor, Global Interdisciplinary Studies*
- FRANCIS P. HAMPTON, 2002; B.C.E., 1996, M.C.E., 1998, University of Delaware; Ph.D., 2004, Drexel University. *Assistant Professor, Civil and Environmental Engineering*
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- PAUL E. HANOUNA, 2005; B.S., 1997, University of California, Berkley; Ph.D., 2005, Purdue University. *Assistant Professor, Finance*
- FREDERICK W. HARTMANN, 1965; B.A., 1962, Lehigh University; M.A., 1963, University of Pennsylvania; Ph.D., 1968, Lehigh University. *Professor, Mathematical Sciences*
- PATRICIA M. HAYNOR, 1992; B.S.N., 1967, Fairleigh-Dickinson University; M.S.N., 1969, University of Pennsylvania; Ph.D., 1989, Widener University. *Associate Professor, Nursing*
- NANCY J. HECK, 1991; B.A., 1978, Furman University; M.B.A., 1980, University of South Carolina. *Instructor, Finance*
- WM. RAY HEITZMANN, 1969; B.S. in Ed., 1964, Villanova University; M.A.T., His. and Soc. Sc., 1966, The University of Chicago; Ph.D., 1974, University of Delaware. *Professor, Education and Human Services*
- CHARLES H. HELMETAG, 1964; B.A., 1957, University of Pennsylvania; M.A., 1959, University of Kentucky; Ph.D., 1968, Princeton University. *Professor, Modern Languages and Literature*
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- SHAMS C. INATI, 1986; B.A., 1968, American University of Beirut; M.A., 1974, University of Texas at Austin; Ph.D., 1979, State University of New York at Buffalo. *Professor, Theology and Religious Studies*
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- ROSE M. O'DRISCOLL, 1966-67, 1969-72, 1976; B.S.N., 1964, Villanova University; M.S.N., 1969, University of Pennsylvania. *Assistant Dean for Administration, College of Nursing; Assistant Professor, Nursing*
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- DANIEL J. O'MARA, 1976; B.S., 1962, Villanova University; M.B.A., 1971, Fordham University. *Associate Professor, Accountancy & Information Systems*
- ELSAYED OMRAN, 1983; B.A., 1964, Ain Shams University, Cairo; M.A., 1974, University of Newcastle on Tyne, United Kingdom; Ph.D., 1983, Georgetown University. *Associate Professor, Global Interdisciplinary Studies*
- ROBERT J. O'NEIL JR., 2007; B.A., 2000, M.A., 2002, Temple University. *Instructor, English*
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- ALFONSO ORTEGA, 2006; B.S.M.E., 1976, University of Texas at El Paso; M.S.M.E., 1978, Ph.D., 1986, Stanford University. *James R. Birle Endowed Chair in Energy Technology, Professor, Mechanical Engineering*
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- GAETANO N. PASTORE, 1962; A.B., 1960, M.A., English, 1962, M.A., French, 1967, Villanova University; Ph.D., 1979, Rutgers University. *Associate Professor, Modern Languages and Literature*
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- LOUISE A. RUSSO, 1993; B.S., 1983, Villanova University; Ph.D., 1987, Pennsylvania State University College of Medicine. *Assistant Professor, Biology*
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- SRIDHAR SANTHANAM, 1989; B.Tech., 1984, Indian Institute of Technology; M.S., 1986, Ph.D., 1989, Arizona State University. *Professor, Mechanical Engineering*
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- JOSEPH T. SCHICK, 1990; B.S., 1982, Villanova University; M.S., 1984, Ph.D., 1987, Drexel University. *Associate Professor, Physics*
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- JEANNE M. SCHINDLER, 2004; B.A., 1990, Georgetown University; M.A., 1995, Ph.D., 2000, University of Notre Dame. *Assistant Professor, Humanities*
- MARGUERITE K. SCHLAG, 2003; B.S.N., 1968, Villanova University; M.S.N., 1970, Case Western Reserve University; Ed.D., 1985, Rutgers, The State University of New Jersey. *Assistant Dean and Director of Graduate Programs, College of Nursing; Associate Professor, Nursing*
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- JOHN J. SCHREMS, 1965; B.A., 1958, Aquinas College; M.A., 1960, Ph.D., 1965, The Catholic University of America. *Professor Emeritus, Political Science*
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- LISA SEWELL, 1998; B.A., 1984, University of California (Berkeley); M.A., 1988, New York University; Ph.D., 1998, Tufts University. *Associate Professor, English*
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- NANCY C. SHARTS-HOPKO, 1986; B.S.N., 1976, Indiana University; M.A., 1978, Ph.D., 1983, New York University. *Director, Doctoral Program; Professor, Nursing*
- COLLEEN SHEEHAN, 1986; B.S., 1977, Eisenhower College; M.A., 1979, Ph.D., 1986, Claremont Graduate University. *Professor, Political Science*
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- LAUREN E. SHOHEIT, 1995; B.A., 1986, Oberlin College; B.Mus., 1987, Oberlin College Conservatory; M.A., 1990, Ph.D., 1994, Brown University. *Associate Professor, English*
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- JAVAD SIAH, 1984; B.S., 1976, M.S., 1978, Pahlavi University (Iran); Ph.D., 1984, University of Pennsylvania. *Assistant Professor, Physics*
- PRITPAL SINGH, 1984; B.S., 1978, University of Birmingham; M.A.S., 1981, Ph.D., 1984, University of Delaware. *Professor, Electrical and Computer Engineering*
- EDWARD M. SION, 1975; B.A., 1968, M.A., 1969, University of Kansas; Ph.D., 1975, University of Pennsylvania. *Professor, Astronomy and Astrophysics*
- JANICE C. SIPIOR, 1990; B.S., 1980, Canisius College; M.B.A., 1982, Ph.D., 1988, State University of New York at Buffalo. *Professor, Accountancy & Information Systems*
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