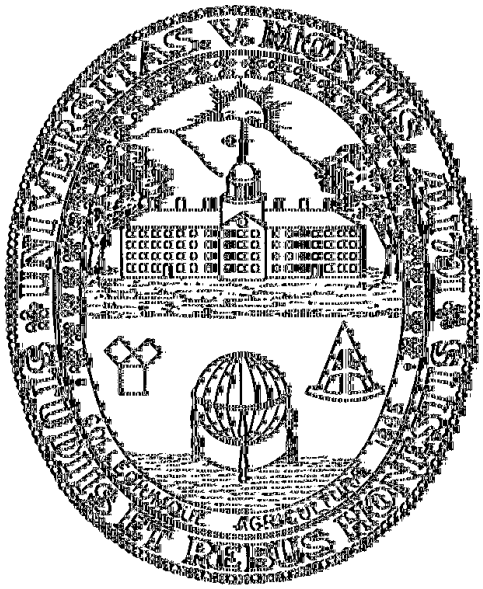

Catalogue 2002-2003

The University of Vermont
Burlington, Vermont 05405
www.uvm.edu

Contents

The Catalogue is produced annually by the Provost's Office and University Graphics & Printing. Gina Bailey, Editor; Tamara Rose Smith, Typography.

Academic Calendar

FALL 2002		
Classes begin	August 26	Monday
Labor Day holiday	September 2	Monday
Fall recess	October 18	Friday
Thanksgiving recess	November 27-29	Wednesday-Friday
Classes end	December 4	Wednesday
Reading and exam period	December 5-13	
Reading days	December 5, 7-8, 11	
Exam days	December 6, 9-10, 12-13	
SPRING 2003		
Classes begin	January 14	Tuesday
Martin Luther King holiday	January 20	Monday
President's Day holiday	February 17	Monday
Town Meeting recess	March 4	Tuesday
Spring recess	March 17-21	Monday-Friday
Honors Day	April 25	Friday
Classes end	April 30	Wednesday
Reading and exam period	May 1-9	
Reading days	May 1, 3-4, 7	
Exam days	May 2, 5-6, 8-9	
Commencement	May 18	Sunday

Academic Calendar information for upcoming years is available on-line at:
www.uvm.edu/~facsen/?Page=calendars.html&-SM=calendarmenu.html

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Notes:

Refer to the policy on Class Attendance in the Academic and General Information section for information regarding observance of religious holidays and participation in intercollegiate athletics.

The Schedule of classes offered through Continuing Education may differ from this Academic Calendar. Refer to Contining Education publications.

Students at The University of Vermont are responsible for knowing and complying with all requirements for their respective degrees as stated in the catalogue.

The University of Vermont reserves the right to make changes in the course offerings, degree requirements, charges, and regulations, and procedures contained herein as educational and financial considerations require, subject to and consistent with established procedures and authorizations for making such changes.

Although its legal title is The University of Vermont and State Agricultural College, the University is known to its students and alumni as UVM. This popular abbreviation is derived from the Latin *Universitas Viridis Montis,* University of the Green Mountains.

The colors of the University are green and gold.
The mascot is the catamount.

Requests for a catalogue, an application form, or information concerning admissions policies and procedures, room and board, and tuition may be addressed to:

Director of Admissions
University of Vermont
194 South Prospect Street
Burlington, Vermont 05401-3596
(802) 656-3370
admissions@uvm.edu
www.uvm.edu

Introduction

UNIVERSITY MISSION

The mission of the University of Vermont is to create and share knowledge. UVM prepares its students to live productive, responsible, and creative lives through a high quality, liberal education. As a research university, UVM endorses the intrinsic value of the creation of new knowledge and promotes the application of relevant knowledge to benefit the State of Vermont and society as a whole.

As a research university, UVM is distinguished by the comprehensiveness of its academic mission, its range of graduate and undergraduate programs, and its commitment to research-based lifelong learning. As a community of scholars, students, both undergraduate and graduate, are involved in the generation of knowledge. As a member of its local and global community, the University has an obligation to share its knowledge, to assist with relevant applications of that knowledge, and to understand and respond to a changing and diverse world.

THE UNIVERSITY: A BRIEF HISTORY

Chartered in 1791, the same year that Vermont became the fourteenth state in the union, The University of Vermont was established as the fifth college in New England. Much of the initial funding and planning for the University was undertaken by Ira Allen who is honored as UVM's founder.

The University of Vermont was the first college or university in the country to have it plainly declared in its charter that the "rules, regulations, and by-laws shall not tend to give preference to any religious sect or denomination whatsoever" — a clear assertion of Vermont's commitment to equality and enlightenment.

Nine more years passed before, in 1800, the University was finally set in motion with a president-professor and a handful of students.

UVM was founded in a day when U.S. colleges and universities existed primarily to educate men for the professions, especially for the ministry. Yet, in studying University history, Professor Emerita Betty Bandel discovered that "this small institution located in a frontier community of New England became a pioneer in the kind of practical education which later became the basis for the establishment of the land-grant universities — those institutions which made it possible for the sons and daughters of average citizens to aspire to a college education." For example, she noted that the University is believed to be the first nonmilitary institution to have offered engineering courses.

The University pioneered in yet another area of society, that of giving women equal status with men in higher education. In 1871, the University defied custom and admitted two women as students and four years later was the first institution in the country to admit women to full membership in the scholarly society, Phi Beta Kappa.

Tucked in the northwest corner of the Ira Allen Chapel grounds is a memorial to a late nineteenth century graduate of this University, Philosopher John Dewey, whose ideas about practical education are still debated with passionate vigor.

The first building was subscribed by citizens of Burlington and, when fire destroyed that edifice in 1824, its successor, for which General Lafayette laid the cornerstone, was again made possible by the citizens of Burlington. That building, the Old Mill, was only the first in a long line to be made possible by private philanthropy. The list includes all but one of the buildings on University Row: Ira Allen Chapel, Billings, Williams, Old Mill, and the Royall Tyler Theatre. Morrill Hall, the first UVM building to be provided by State funding, did not come until 1907.

Nearly all state universities function as departments of government, and the faculty and staff are state employees. In Vermont, the University is an "instrumentality" of the State and its Board of Trustees balances both the public and private sectors. The Board is composed of 25 members: nine self-perpetuating, nine elected by the State Legislature, three appointed by the Governor, and two members of the student body. The President of the University and the Governor of the State serve as *ex officio* members of the Board.

During 2001-2002, 7,472 students were enrolled in the eight undergraduate colleges and schools — the Colleges of Agriculture and Life Sciences, Arts and Sciences, Education and Social Services, and Engineering and Mathematics, and the Schools of Allied Health Sciences, Business Administration, Natural Resources, and Nursing — and 1,082 were enrolled in the Graduate College and 386 in the College of Medicine. In addition, 1,120 students enroll in courses offered by Continuing Education. The University employs over 3,000 full- and part-time faculty and staff.

The campus of The University of Vermont is located in Burlington, the State's largest city. Within a greater Burlington area of 132,000 people, the city with its population of 35,000 enjoys magnificent views of Lake Champlain and the Adirondack Mountains to the west and Vermont's Green Mountains to the east. Burlington is located approximately 200 miles northwest of Boston, 300 miles north of New York City, and 100 miles south of Montreal.

THE GRADUATE COLLEGE

The Graduate College serves the needs of college graduates who desire continued professional development and a broader and more thorough knowledge of scholarship and research in their chosen fields. The College offers master's degree programs in over 70 fields of study and doctoral degree programs in 20 fields. In some departments, selected undergraduate students may participate in Accelerated Master's Degree Programs. For detailed information regarding graduate programs, degree requirements, and Graduate College regulations and procedures, refer to the Graduate College Catalogue available from the Graduate Admissions Office, 333 Waterman Building. Information is also available through www.uvm.edu/~gradcoll/.

Persons applying to and enrolled in graduate programs are expected to be familiar with the general regulations of the Graduate College and with the specific degree requirements in their chosen fields of study. Questions pertaining to matters other than admission to graduate programs may be directed to the Graduate College Dean's Office, 333 Waterman.

COLLEGE OF MEDICINE

The UVM College of Medicine is one of the oldest and most respected medical schools in the nation. Since its establishment in 1822, the College's mission has been the education of undergraduate and medical students. This

has evolved to include the education of residents, graduate students, and postdoctoral fellows, as well as continuing medical education of health professionals in the state, region, and the nation. During the past 30 years the College's mission has embraced cutting-edge health research, accessible high quality patient care, and community/public service. Physicians educated or trained at the UVM College of Medicine and its affiliated health care organization — Fletcher Allen Health Care — are a vital part of the region's health care work force, accounting for nearly half of Vermont's physicians.

CONTINUING EDUCATION

Continuing Education provides innovative credit and noncredit programs in a variety of settings, educational formats, technology options, and locations. Noncredit offerings include community education "short courses" as well as a full range of seminars, workshops, conferences, teleconferences, and video products on topics of current interest to college graduates and their peers. The Lane Series presents concerts and theatre productions for an audience of students, faculty, staff, and the community at large.

Continuing Education courses are offered by UVM faculty and approved adjunct faculty. Additional information is available on-line at learn.uvm.edu.

UNIVERSITY EXTENSION

UVM Extension is one of the doors to The University of Vermont for Vermonters. Extension faculty and program staff, located on-campus and in all regions of the state, offer up-to-date information to help Vermonters make informed choices, answer questions, and solve problems.

Extension provides a two-way link between the University and the people of the state — using knowledge and research to meet their needs and bringing back to the University the real-life questions and concerns needing further research. Areas of priority are agriculture; community resources and economic development; natural resources and environmental management; nutrition, food safety, and health; and youth and family development.

LIBRARIES AND MEDIA SERVICES

The main unit of the University libraries, Bailey/Howe Library, provides services, print, and electronic resources relating to the humanities, social sciences, and many of the sciences. This library houses the largest book, periodical, and map collection in Vermont. It is a depository for U.S. and Canadian government publications, and provides a full service Patent and Trademark Depository Library. The Special Collections Department includes a comprehensive collection of Vermont materials, the Wilbur Collection, rare books, literary and historical manuscripts, and the papers of many individuals associated with the state and federal governments. A separate Chemistry and Physics library is located in Cook Physical Sciences Building. Collections relating to medicine and the health sciences are housed in the Dana Medical Library.

Most library holdings are accessible through the online catalog Voyager and the gateway to information sources, SAGE. Many additional resources and information about the Libraries can be accessed through the Libraries web page http://sageunix.uvm.edu. Sage provides access, in a fully integrated way, to Voyager, on-line indexes, full text magazines and reference works, and the World Wide Web.

The Library Research Annex (LRA), located just beyond Police Services (directly east of the corner of East Avenue and Carrigan Drive), contains many older and less used books, periodicals, government documents as well as the UVM archives.

ROBERT HULL FLEMING MUSEUM

The Fleming Museum is an important art center and multicultural resource for the UVM community. It houses a collection of more than 18,000 works, including American and European paintings and works on paper, American decorative arts and costumes, and outstanding collections of art and artifacts from African, ancient Egyptian, Pacific, and Native American cultures. In addition to the permanent galleries, changing exhibitions are shown throughout the year. This year's special exhibitions include: an exceptional collection of 15th-19th century Chinese paintings, landscape paintings by 19th-century Vermont artist Charles Louis Heyde, and drawings by the renowned American artist Thomas Eakins. Lectures, workshops, films, performances, and exhibition openings are held in conjunction with exhibitions and are free to UVM students, faculty, and staff.

The Fleming Museum provides access to the collections and exhibitions for study and research. Undergraduate and graduate students from the departments of art, history, English, education, and anthropology have assisted with the production of exhibitions, art classes for children, and community family day. Interns receive academic credit for their work. Over 40 work study students each semester work in the Museum in the areas of education, public relations and marketing, security, and exhibition design and construction.

Stocked with books, posters, and items related to the exhibitions, the Museum Store is an inviting resource at gift-giving time. The Fleming has more than 700 members, with a student membership category available.

THEATRE

The Royall Tyler Theatre is the home for the season of plays presented by the Department of Theatre. Our season is made up of three main stage productions, a holiday play for children, and an evening of one-act plays directed, performed, and designed entirely by students.

The Department of Theatre, in collaboration with the University Resident Theatre Association (URTA), brings professional guest artists — performers, directors, designers — to work side-by-side with students on our main stage productions.

The arts are vital to individuals as well as civilizations, and the Department presents the fruits of the artistic work of students and faculty alike. Within the context of a liberal arts college, the theatre program in the classroom and on the stage and public platform attempts to expose its audience to its theatrical heritage. A rich curriculum is enhanced by an adventurous production schedule. The Department also offers courses and activities in public speaking and debate, the excellence of which are nationally recognized. All members of the UVM community are encouraged to participate in these programs and to share the Department's commitment to vital living theatre.

MUSIC

Opportunities for participation and appreciation are available for students with strong musical interests. The University Choir, Choral Union, and Catamount Singers are open by audition to students seeking participation in cho-

ral ensembles. The University Band, Jazz Band, Vermont Winds, Brass, Tuba, and Percussion ensembles, Trombone Choir, and University Orchestra provide performance opportunities for instrumentalists. All perform in various public presentations during the year. On occasion, the Choir and Choral Union have been invited to perform with the Vermont Symphony Orchestra; the University Pep Band performs at athletic events, and the Band mounts a spring tour. The University Orchestra presents several varied concerts of standard orchestral literature plus concertos featuring outstanding music students or combines forces with the vocal ensembles for presentation of major choral works.

In addition to the larger ensembles, faculty and senior recitals, special departmental concerts, and guest artists are scheduled throughout the school year. Individual instruction on all orchestral instruments, piano, organ, harpsichord, guitar, and voice may be arranged (contact the Music Department office for specific information).

The offices of the Music Department are located in the Music Building on Redstone Campus. An important feature of this facility is its beautiful recital hall, which houses the C.B. Fisk organ, one of the finest instruments in the Northeast. The Music Department serves as a showcase for the musical talents of the music majors and the faculty, as well as for those students seeking musical activity as a part of their extracurricular life on campus.

THE GEORGE BISHOP LANE ARTISTS' SERIES

Established in 1955 with a generous gift from the Lane family, the Lane Series features a diverse season of performing arts events including classical music, early music, opera, theatre, jazz, and folk music. Each year brings a variety of artists – from established international favorites to promising new talent.

Serving as a link among many constituencies, the Lane Series finds its audience, volunteers, and advisors from the students, faculty, and staff of UVM as well as the community at large. In addition to the presentation of performances, the Lane Series ensures students and public direct interaction with performers through master classes, workshops, residencies, lectures, and receptions. The Friends of the Lane Series serve as advisors and volunteer many hours of service; corporate and private sponsors throughout the state provide financial support.

The Lane Series is a part of Continuing Education. The offices are located at 30 South Park Drive in Colchester, VT (802) 656-4455. Tickets are available by calling the Campus Ticket Store (802) 656-3085. The Lane Series offers $5 student rush tickets at the venue on the night of events.

LAWRENCE DEBATE UNION

The Lawrence Debate Union (LDU) provides an opportunity for interested students to participate in intercollegiate debating. LDU members attend debate tournaments throughout the nation, each year engaging in over 400 debates at more than a dozen tournaments. Competition of this caliber teaches skills of efficient research, rigorous thought, and effective communication. The program is designed to develop the abilities of both the experienced debater and the beginner. Outstanding performers receive recognition in the form of annual awards. The LDU sponsors a weekly television show (Flashpoint), the annual World Debate Institute Summer programs, and the world's largest debate instruction website (http://debate.uvm.edu).

MORGAN HORSE FARM

The Morgan Horse Farm in Weybridge, Vermont, 35 miles south of the main campus, has been a shrine for Morgan horse lovers for more than a century. The Morgan breed dates back to 1789 when the first small but powerful stallion was born to a mare owned by school teacher Justin Morgan.

The Morgan Farm was established in 1878 by Joseph Battell of Middlebury who compiled the first volume of the Morgan Horse Registry and constructed the farm landmark, an ornate Victorian barn with mansard roof. In 1907, Battell deeded the farm to the U.S. Government, which in 1951 turned the farm over to The University of Vermont.

The farm has become a laboratory for UVM students and the focal point for Morgan Horse lovers around the world. The farm continues to host thousands of visitors annually.

A versatile, highly intelligent horse, the Morgan is Vermont's State Animal. The Morgan Horse Farm is conducting crucial research on reproductive physiology and the breeding program at the Morgan Farm has produced numerous blue ribbon winners at the National Morgan Horse Show.

HONORARY AND RECOGNITION SOCIETIES

Honorary and recognition societies at The University of Vermont recognize student contributions to the UVM community and their leadership in campus life.

University honorary societies include Boulder Society, which acknowledges outstanding senior men; and TOWERR, which acknowledges outstanding senior women.

National honorary societies represented on campus are as follows:

The ***Phi Beta Kappa Society*** established the Vermont Alpha Chapter at the University in 1848 and the local chapter was the first in Phi Beta Kappa to initiate women into membership. Initiates are chosen on the basis of high scholastic standing with emphasis on a broad distribution of liberal studies. This is interpreted to mean course work in all seven College of Arts and Sciences distribution categories including intermediate-level foreign language study. Membership criteria are published on the Web; interested students and advisors should consult the chapter president.

Mortar Board is a national society for senior women and men. Although membership in Mortar Board comes as a high honor for a UVM student in recognition of outstanding service, scholarship, and leadership, it is also a challenge for continued unselfish service in the best interests of the college campus.

Golden Key National Honor Society recognizes the top fifteen percent of juniors and seniors in all fields of study. The society emphasizes scholarship and community service.

The ***Society of the Sigma Xi,*** established in 1945, initiates those who have proven their ability to do research in one of the sciences, including students who have a high scholastic standing.

The alpha chapter of ***Nu Delta Epsilon*** was established at UVM in 1993. It is the first national honor society to recognize non-degree students who excel academically and exhibit a strong commitment to higher education and personal achievement.

Other national honorary societies include: Alpha Omega Alpha, medicine; Alpha Zeta, agriculture; Beta Gamma Sigma, business administration; Kappa Delta Pi, educa-

tion; Sigma Theta Tau, professional nursing; Tau Beta Pi, engineering; Omicron Nu, home economics; Delta Sigma Rho-Tau Kappa Alpha, debating; Phi Alpha Theta, history; Psi Chi, psychology; Eta Sigma Phi (Iota Chapter), classical studies; Alpha Kappa Delta, sociology; Sigma Phi Alpha, dental hygiene; Lambda Alpha, anthropology; Chi Epsilon, civil engineering; Xi Sigma Pi, forest resources; Ethan Allen Rifles, outstanding students in the Reserve Officers' Training Corps; Champlain Sabres, a military fraternity; and Phi Eta Sigma, outstanding first-year students.

ACCREDITATIONS

The University of Vermont is accredited by the New England Association of Schools and Colleges, Inc., a nongovernmental, nationally-recognized organization whose affiliated institutes include elementary schools through collegiate institutions offering postgraduate instruction.

Accreditation of an institution by the New England Association indicates that it meets or exceeds criteria for the assessment of institutional quality periodically applied through a peer group review process. An accredited school or college is one which has available the necessary resources to achieve its stated purposes through appropriate educational programs, is substantially doing so, and gives reasonable evidence that it will continue to do so in the foreseeable future. Institutional integrity is also addressed through accreditation.

Accreditation by the New England Association is not partial but applied to the institution as a whole. As such, it is not a guarantee of the quality of every course or program offered or the competence of individual graduates. Rather, it provides reasonable assurance about the quality of opportunities available to students who attend the institution.

Inquiries regarding the status of an institution's accreditation by the New England Association should be directed to the administrative staff of the University. Individuals may also contact the New England Association of Schools and Colleges, 209 Burlington Road, Bedford, MA 01730-1433, (781) 271-0022.

Specific academic program accreditations include:

ALLIED HEALTH SCIENCES
- Biomedical Technologies
  - Medical Laboratory Science—National Accrediting Agency for Clinical Laboratory Science
  - Nuclear Medicine Technology—Joint Review Committee on Educational Programs in Nuclear Medicine Technology
- Dental Hygiene—American Dental Association
- Physical Therapy—American Physical Therapy Association

ARTS AND SCIENCES
- Chemistry—American Chemical Society
- Speech-Language Pathology—American Speech-Language-Hearing Association
- Clinical Psychology—American Psychological Association

BUSINESS ADMINISTRATION
- American Assembly of Collegiate Schools of Business

EDUCATION
- Athletic Training Education Program—Commission on Accreditation of Allied Health Programs
- National Council for Accreditation of Teacher Education
- Social Work—Council on Social Work Education
- Teacher Education—Vermont Department of Education

ENGINEERING AND MATHEMATICS
- Engineering Programs (Mechanical, Electrical, Civil)—
- Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc.

MEDICINE
- Liaison Committee on Medical Education, American Medical Association-Association of American Medical Colleges

NATURAL RESOURCES
- Forestry—Society of American Foresters

NURSING
- National League for Nursing Accrediting Commission

Admission to the University

The University of Vermont selects those students who demonstrate the greatest potential for academic success at the University based on prior academic performance. Academic performance for all applicants will be measured based on the criteria outlines under "General Admissions Criteria."

GENERAL ADMISSIONS CRITERIA

The University of Vermont selects those students who demonstrate the greatest potential for academic success at the University based on prior academic performance.

Recognizing the University's focus on engagement with local, state, national and global communities, admission policies focus on achieving geographic balance; variety of experience and background; and cultural/economic diversity within the fabric of its student population. As a state-assisted university, The University of Vermont has a special commitment to Vermont residents, a commitment reflected by ensuring that Vermont students receive priority consideration in the admissions process. Our commitment to forging a diverse educational community is manifested in a special effort to recognize and meet the educational needs of members of ALANA (African American, Latino, Asian, and Native American) populations.

Determining potential for a student to benefit from a UVM education lies at the heart of the work of the University's Office of Undergraduate Admission. This determination is based on a blending of the academic record with other attributes in a student's background. A candidate for admission must demonstrate an ability to perform at a high level scholastically. For a first-year student, this is determined by performance in high school and on standardized examinations. Transfer and non-traditional candidates will be evaluated on the results of completed college-level course work, standing at previous institutions, and/or other educational credentials appropriate to student age and educational history. At a minimum, candidates for admission are expected to complete the entrance requirements established by the UVM faculty to ensure exposure to broad fields of intellectual inquiry; some programs require further study in areas relevant to professional development. Additionally, to form a comprehensive view of a student's candidacy, University admission staff gauge the rigor of a student's program by reviewing breadth of study and course levels (e.g. Honors and AP course work); measure the student's relative standing in the graduating class through grade point average, class rank, or other indices; observe trends in the student's performance over time; and assess the competitive nature of the high school and/or college environment. Standardized test scores are viewed as one of several indicators of student academic potential and not as a single criterion for admission to the University.

Beyond academic credentials, other characteristics and experiences in a student's background are reviewed in making an admission decision – particularly when the academic record in isolation is not decisive. Required student essays, recommendations, and other evidence of the student's life experiences are examined to more fully understand the student's potential to succeed and contribute at UVM. All achievements, both academic and non-academic, will be considered in the context of the opportunities an applicant has had, hardships or unusual circumstances faced, and the response to these. Evidence of special talents, community service, imagination and tenacity are also considered indicative of promise for future contributions to the life of the University and to its mission. Admission decisions are made without regard to family financial circumstances, although University financial aid and scholarship funding is deployed on the basis of academic merit as well as financial need.

Although University Admissions staff makes final admission decisions, consultation with academic unit representatives precedes any decision for a student whose credentials may not be clear and decisive. Admission policies are made by the Department of Admission in collaboration with the schools and colleges that constitute The University of Vermont and are subject to review by The University of Vermont Faculty Senate and the Board of Trustees.

Minimum Entrance Requirements

At a minimum, candidates for all majors at UVM are expected to have met the following requirements prior to entry.

4 years of English

3 years of Mathematics (Algebra I, geometry, Algebra II, or equivalent courses)

3 years of social science

2 years of natural or physical science

2 years of the same foreign language

Course work not completed at the high school level may be fulfilled by equivalent college-level academic work.

In general, one semester of college work is considered the equivalent of one year of high school study.

Any exceptions to these requirements are made on a case-by-case basis.

Requirements and Recommendations by UVM College/School

Each of the University's undergraduate colleges and schools reserves the right to set additional requirements for their majors and to recommend courses of study beyond the minimum presented below.

College of Agriculture & Life Sciences

Required courses: 1 year of biology and 1 year of chemistry for science majors

Recommended: All candidates to the College of Agriculture & Life Sciences are strongly encouraged to take 1 year of physics and at least 1 year of college preparatory math beyond Algebra II (calculus is preferred) in addition to biology and chemistry.

College of Arts & Sciences

Recommended: Candidates are evaluated on the breadth and depth of their academic record, and performance in courses across the span of liberal arts disciplines. Candidates are strongly encouraged to present 4 years of mathematics, including trigonometry and to continue foreign language study during their junior and senior years.

Business Administration

Required: 1 year of college preparatory mathematics (trigonometry or pre-calculus preferred) beyond Algebra II.

Recommended: Potential business students are strongly encouraged to enroll in science course work beyond the minimum requirement. Overall performance in mathematics courses is an important factor in the admissions decision.

College of Education & Social Services

Recommended: Candidates for the Human Development and Family Studies and Social Work programs are encouraged to complete 1 year of biology. Candidates in all teacher education programs are strongly encouraged to pursue mathematics and science course work beyond the minimum requirement.

Students applying to teacher licensure majors must present solid mathematics preparation for the PRAXIS teacher certification examinations.

College of Engineering & Mathematics

Required: 1 year of chemistry and 1 year of physics for all majors.

4 years of mathematics is required including trigonometry.

For majors in Computer Science Information Systems, 1 year of college preparatory/advanced math beyond Algebra II.

Recommended: Candidates to Electrical, Civil, and Mechanical Engineering should present a strong mathematics and science background, including trigonometry and advanced algebra.

Mathematics background and performance is a critical factor in the admission of students to the Computer Science Information Systems, Statistics, Engineering Management, and Mathematics majors.

School of Natural Resources

Required: 1 year of biology as part of the science requirement

Recommended: Students applying to the School of Natural Resources are urged to present a fourth year of college preparatory math and to continue taking science courses.

College of Nursing and Health Sciences

Required: For Biomedical Technologies majors: 1 year of biology and 1 year of chemistry; 4 years of math, including trigonometry.

Recommended: For all candidates to the College of Nursing and Health Sciences, including transfer students: proficiency in physics, biology, chemistry, and mathematics through trigonometry.

Application Deadlines, Notification Dates, and Enrollment Deadlines

(The deadlines noted below are postmark dates)

Spring Semester

November 1 – First-year, Transfer, and Evening University candidates. Notification is on a rolling basis no later than the end of December. Payment of a $300 acceptance fee as proof of intention to enroll is generally due 20 days beyond the date of the letter of admission or by a date printed in the application materials.

Fall Semester

November 1 - Early Action and Early Decision deadline for first-year candidates only. Notification is in late December. Candidates admitted under Early Decision must pay a $300 acceptance fee as proof of intention to enroll by January 15. Early Action candidates have until May 1 to pay the fee.

January 15 – Regular First-Year candidates. Notification is in late March. A $300 acceptance fee is due May 1 as proof of intention to enroll.

April 1 – Transfer and Evening University candidates. Notification is on a rolling basis no later than the middle of May (assuming the candidate provides all supporting materials in a timely fashion).

Please contact the Admissions Office regarding submission of applications beyond the stated deadline. Requests will be considered on a case-by-case, space available basis.

International students should adhere to all application deadlines. Notification is on a rolling basis.

Candidates to the RN/BSN should contact the School of Nursing to obtain an application; admission to this program is on a rolling basis.

Application and Supporting Materials

To review an application and render a decision, the Admissions Office must receive the following by the appropriate deadlines:

- **The Application for Admission** completed and signed by the student. Use of one of the electronic options available on the web at www.uvm.edu/admissions is encouraged. Candidates may also use the Common Application, available online at www.commonapplication.org or from a local high school guidance department. If using the Common Application, please complete the supplemental form required by UVM.
- **A non-refundable $45 application fee** to the University of Vermont via check or money order or credit card (see the form bound into the Application for Admission). For candidates for whom the fee poses a financial hardship, fee waivers are available from a guidance counselor, another person familiar with the financial situation, or from the Admissions Office.
- **Official transcripts** from all secondary and (for transfer students) postsecondary course work . Candidates may not ignore any previous academic work and are expected to provide a full, accurate accounting of the academic record. Only transcripts forwarded from the issuing agency are considered official.

- **Standardized testing results** (First-Year Candidates only) The University requires first-year candidates to submit results from either the Scholastic Assessment Test (SAT I) or ACT from the American College Testing Program. UVM's code for the SAT I is 3290 and 4322 for the ACT. For further information regarding these tests, contact a high school guidance office or go directly to the following web sites: www.collegeboard.org or www.act.org.
- **Letter of recommendation** All candidates must present at least one letter of recommendation. First-year students are encouraged to obtain a recommendation from either a guidance counselor or current teacher. Additional letters are welcome.
- **Essays** UVM requires one extended essay as part of the admissions process.
- **Music Majors** Candidates for the Bachelor of Music, Bachelor of Arts in Music, and Bachelor of Music Education must contact the Music Department at 802 656-3040 to arrange for an audition or to submit an audition tape before the application deadline. Tapes become property of UVM and will not be returned.

Matriculation Status

The Admissions Office requires proof of high school graduation or equivalent for all candidates entering degree programs at UVM.

High school graduates must submit a final high school transcript. Recipients of the **General Education Development (GED) Certificate** should have an official score report forwarded to the Admissions Office in addition to official transcripts of any previous high school or college-level work completed.

The University of Vermont welcomes applications from students who plan to complete high school in three years, provided all entrance requirements and other admissions criteria have been met. **Three-year graduates** are asked to submit written proof of support from the high school indicating that the school district has approved early graduation and is prepared to issue a diploma.

UVM welcomes applications from **home-schooled students**. Students are required to meet all the entrance requirements outlined in this catalogue, to submit standardized test results (First-Year candidates only), to document academic work covered by the curriculum, and provide proof of graduation. Home-schooled students must supply the Admissions Office with a copy of the information forwarded by the teacher to the state education department. If entrance requirements cannot be determined from this information, the teacher will be contacted to confirm completion. Official college transcripts are required for any college-level course work. CLEP (College Level Examination Program) results may be used to demonstrate background in required areas. An official transcript of any course work taken at a local high school is also required.

Acceptable Proof of Graduation:

- High School Diploma (Some home-schooled students receive a diploma from their area secondary school.)
- General Education Development (GED) certificates and state certificates.
- A Certificate of Completion of a home-study program if the program is recognized by the student's home state.
- For transfer students only: If a formerly home schooled student has completed two years of college course work comparable to UVM course work and has met all entrance requirements, no proof of graduation is required.

ADMISSIONS PROGRAMS

Early Decision is a program open to first-year candidates who have identified UVM as their first choice. Applications for the fall are due in the Admissions Office by November 1 and notification is in late December. Candidates admitted under Early Decision commit themselves to attending the University and are required to pay the Acceptance Fee and Advance Tuition Deposit by January 15. Withdrawal from the Early Decision contract is possible only if a proposed financial aid award is inadequate.

Candidates denied under Early Decision may not reapply for the fall semester.

Early Action Students applying for first-year status who wish to learn of their admission decision by late December may apply by November 1 under the Early Action program. Candidates admitted under Early Action have until May 1 to pay an Acceptance Fee and Advance Tuition Deposit and are not making a commitment to attend the University.

Early Action applicants are offered admission if their academic records are very strong. Some Early Action candidates will be deferred until the Admissions Office has reviewed all first-year applicants for fall admission. A small number of candidates will learn in late December that they have been denied admission.

For new students, some scholarship preference will be given to those students applying under Early Decision or Early Action programs.

New England Regional Student Program The University of Vermont participates with the other public two-and four-year institutions of higher education in the six New England states in the New England Regional Student Program, an option aimed at increasing educational opportunities for the region's students.

New England residents who enroll in UVM programs open to them under the New England Regional Student program are charged 150 percent of in-state tuition.

UVM programs offered for the 2002-03 academic year are:

Botany to residents of MA;
Canadian Studies to residents of CT, MA, NH, and RI;
Classical Languages (Greek and Latin) to residents of CT and RI;
Forestry to residents of CT and RI;
Latin to residents of CT and RI;
Russian to residents of CT, ME and RI.

For a full listing of programs and policies, contact the New England Board of Higher Education, 45 Temple Place, Boston, MA 02111, (617) 357-9620.

Guaranteed Admission Program (GAP) The Guaranteed Admission Program provides an avenue of entry to the University of Vermont for students who are not yet ready to enter an undergraduate degree program. The Guaranteed Admission Program provides advising services and guarantees admission after successful completion of approved academic credit courses taken through Continuing Education. The program is administered cooperatively by Continuing Education, Undergraduate Admissions, and the deans' offices of the colleges and schools within UVM.

To qualify for the Guaranteed Admission Program students must have a high school diploma or GED. Students will complete a minimum of 18 semester credits in ap-

proved courses as well as courses for the proposed major and general education requirements. Any admissions requirements lacking from high school must also be completed. A grade point average of 3.0 must be maintained. Students in the program have the option of applying for admission at any time as regular applicants. Admission is only guaranteed, however, to those students who have successfully completed their contract course work. Please refer to admission deadlines.

A few majors may have additional restrictions or may not be accessible through the Guaranteed Admission Program. Please contact the Office of Undergraduate Admissions or Continuing Education for a list of these programs.

Students should call the Continuing Education Office at (802) 656-2085 or (800) 639-3210 to schedule an appointment with an advisor. A high school transcript as well as a transcript for any previous college work should be provided at the appointment.

The advisor will discuss the program and begin the process of determining the courses needed to complete the contract. If a student has earned previous credits, a copy of his/her transcripts will be forwarded to the Office of Transfer Affairs to determine which courses will transfer to UVM upon admission.

UVM Evening University Students can enter a baccalaureate program in any of six majors by taking classes which start after 4:00 p.m.

Students may earn a degree in Art (Studio Concentration), English, Psychology, Mathematics, and Sociology. A minor in Women's Studies is also available. An Evening University student earns the same degree as any other baccalaureate candidate who attends UVM.

The UVM Evening University is backed by evening support services for students, including advising, registration, information about financial aid, and other administrative services. Evening University students can access these services through the Continuing Education Student Services Office from 8:00 a.m. until 7:30 p.m. Monday through Thursday, and from 8:00 a.m. to 4:30 p.m. on Friday.

The application deadline for the fall semester is April 1. For the spring semester the deadline is November 1.

UVM College of Agriculture and Life Sciences/Tufts University School of Veterinary Medicine B.S./D.V.M. Program

First-time, first-year candidates who meet rigorous eligibility criteria may apply for admission to the seven-year Bachelor of Science/Doctor of Veterinary Medicine program offered jointly by UVM's College of Agriculture and Life Sciences and the Tufts University School of Veterinary Medicine. Students accepted in the program pursue three years of study (approximately 90 credit hours) at UVM with a major in either Animal Sciences or Biological Sciences. A grade-point average of 3.25 must be maintained at UVM to guarantee entry to the Tufts University D.V.M. program. After successful completion of the first year in the Doctor of Veterinary Medicine program, candidates are awarded the Bachelor of Science degree from The University of Vermont.

If accepted into the joint program, students may elect not to attend Tufts, may continue for a fourth year at UVM and graduate before entering the Tufts University School of Veterinary Medicine, or they may elect to take a year off before entering Tufts.

Students must apply to UVM by January 15 and the B.S./D.V.M. program by February 1. Both applications should be sent to the Admissions Office at UVM. The fee for filing a University of Vermont application is $45; there is a fee of $60 for filing the Tufts University application.

Candidates are screened initially by the UVM Admissions Office. The documents of those applicants considered admissible to UVM are then forwarded to the Tufts University School of Veterinary Medicine for review. Tufts University shares its decisions with the Admissions Office at UVM. UVM notifies candidates of their status at both institutions. Due to the timing of these processes, candidates may learn of admissions decisions from UVM before learning of their status at Tufts. Candidates will learn of their status at both institutions by April 1.

Spaces in the Tufts University School of Veterinary Medicine are limited. Thus an excellent student may gain admission to UVM but be denied admission to the Tufts University School of Veterinary Medicine. A student in this situation may still complete a preveterinary program at The University of Vermont and apply for admission to veterinary schools, including the Tufts University School of Veterinary Medicine, upon graduation from UVM.

For information regarding admission to UVM's College of Agriculture and Life Sciences, please consult information contained in that section of the UVM Catalogue and in the UVM Viewbook. Successful candidates to this program should present:

1. An excellent background in high school biology, chemistry, and mathematics. Course work in AP Biology, AP Chemistry, and AB Calculus is encouraged.
2. Standardized test scores at or above the 80th percentile nationally.
3. A high school class rank in the top ten percent where class rank is available. Candidates attending schools where rank is not computed must demonstrate a high level of academic achievement.
4. Some appropriate animal and/or veterinary experience.

To receive a UVM/Tufts University application packet, please contact the Admissions Office, University of Vermont, 194 South Prospect Street, Burlington, VT 05401-3596 (802) 656-3370.

For information about University of Vermont course work for the joint UVM/Tufts University Program, please consult the College of Agriculture and Life Sciences section of the catalogue.

TRANSFER STUDENT ADMISSIONS

The University welcomes applicants who have demonstrated success at other institutions of higher education and who have met all University-wide entrance requirements either in high school or in college. For the purpose of admission, a transfer candidate is one who has taken college-level courses for credit after completion of secondary school.

Residents of Vermont receive preference in transfer admission. Out-of-state residents are admitted on a space-available, competitive basis.

In making transfer admission decisions, the Admissions Office reviews all academic information available: official transcripts of all college-level work and the high school record (or General Education Development Certificate). Submission of standardized test scores such as the **SAT I** or the **ACT** is optional for transfer candidates. If submitted, test scores may help in making an admission decision.

Transfer candidates are subject to the minimum entrance requirements outlined for first-year candidates. Any entrance requirement not fulfilled in high school can be met by an equivalent semester-long college course.

For transfer candidates who have earned under 30 college-level credits, the quality of the high school record remains an important evaluation tool. After 30 earned credit hours, the college grade-point average and course selection are the most important factors in a decision. The Admissions Office still needs to see the high school record to determine if all University-wide entrance requirements have been met.

The minimum grade point average requirement for all transfer candidates is a 2.5 (C+) average on a four-point scale. Generally, to be competitive a 3.0 average or above is recommended.

Transfer Credit Policy

The Office of Transfer Affairs reviews each college-level course taken by transfer candidates accepted for admission. A written evaluation is sent to each transfer candidate indicating the status of each course. To receive transfer credit, a course must have been taken at an accredited college or university for credit; it must be comparable in content, nature, and intensity to a course offered at UVM; and the grade earned must be comparable to a "C" or higher as indicated on an official transcript. The dean of the college or school determines the applicability of the transfer course(s) to the student's degree requirements at the University.

All transfer credit remains provisional until the transfer student successfully completes one semester of course work as a degree student at UVM. The UVM grade-point average reflects only course work taken here. Grades from other institutions are not calculated into the UVM GPA and will not appear on a UVM transcript.

Credit through the **Advanced Placement Program (AP) of the College Board** is granted as a specific university course, or courses, with scores of 4 or 5. Scores of 3 are acceptable for some exams. Official AP score reports must be sent directly to the Office of Transfer Affairs. AP course equivalencies are determined by the faculty of the corresponding subject area and are awarded by the Office of Transfer Affairs. AP credit is assigned a UVM course equivalency and applicability to the degree program is determined by the student's dean's office.

Courses taken on a college or university campus while a student is still in high school may be eligible for transfer credit. Students should contact the Office of Transfer Affairs for assistance in determining transferability of these courses.

College-level courses taken through high school cooperatives, such as **Syracuse Project Advance (SUPA)**, do not transfer to UVM. Students who participate in high school cooperative programs and wish to pursue credit must take a nationally-standardized examination to demonstrate college level subject mastery. **Advanced Placement Examinations (AP),** which can be taken while still in high school, **or College Level Examination Placement (CLEP),** would serve as recognized standardized examinations. A third option is the UVM Credit by Exam. Contact the Office of Transfer Affairs to see what specific subject areas are covered by these exams.

Further questions regarding transfer credit should be addressed to the Office of Transfer Affairs, 360 Waterman Building, University of Vermont, Burlington,VT 05405.

INTERNATIONAL STUDENT ADMISSIONS

The University welcomes the applications of international students.

Academic Documents International applicants must submit official transcripts of all secondary and postsecondary education, including final examination results. If documents are not in English, certified translations are required. Information regarding certified translation services can be obtained at the applicant's embassy or through NAFSA: the Association of International Educators, 1875 Connecticut Ave., NW, Suite 100, Washington, DC 20009-5728, (202) 462-4811; www.nafsa.org.

Transfer Credit for International Students
International students who have attended postsecondary institutions in their home country may be eligible for UVM credit under the Transfer Credit Policy guidelines. International students should submit comprehensive course descriptions and outlines, translated in English, to the Office of Transfer Affairs, 360 Waterman Building, Burlington, VT 05405, USA. Submission of these materials prior to enrollment helps the Office of Transfer Affairs prepare a full credit evaluation prior to enrollment at UVM. All translations must be certified by the school of record, or by an official government translation agency with the seal of the college over the translation. Translations must accompany all original documentation.

Standardized Tests Students applying as first-year candidates must present scores from either the Scholastic Assessment Test (SAT I) or the American College Testing Program (ACT). If English is not the first language, the Test of English as a Foreign Language (TOEFL) is also required. Because the University does not offer an intensive English as a Second Language (ESL) program, the Admissions Office requires a minimum TOEFL test score of 550 (213 on the computer version). For information about test dates and sites for SAT and TOEFL exams, contact the Educational Testing Service in Princeton, NJ (609) 771-7100; www.ets.org.

English as a Second Language (ESL) Programs The University of Vermont offers a few English-as-a-Second-Language courses intended to ease the transition to studying and living in an English-speaking environment. Interested students with TOEFL scores below the recommended minimum may want to consider transferring to the University of Vermont after studying at a U.S. college or university that offers intensive ESL preparation, although UVM will consider candidates on a case-by-case basis.

The ESL intensive program located the closest to the University of Vermont is at Saint Michael's College, an accredited institution of higher learning in nearby Winooski, Vermont. For full information about Saint Michael's College, write to the School for International Studies, Saint Michael's College, Winooski, VT 05404 (USA Telephone: 802 654-2000, extension 2300; Telex 5102990013, VT, SMC WINO).

For further information concerning available programs, contact: NAFSA: Association of International Educators, 1875 Connecticut Ave. NW, Suite 100, Washington, DC 20009-5728; www.nafsa.org.

Financial Support for International Students The University offers a few partial tuition scholarships to international students each year. Most international students pay the full cost of attending UVM; and those attending on nonimmigrant student visas are charged out-of-state tuition rates. All international students are considered; no additional application is required. These are merit-based scholarships.

Form I-20 The I-20 document is used to obtain a student visa and can only be issued when the student provides certification that sufficient financial support is available to cover educational expenses for the duration of stay in the U.S.

Two pieces of information are required for financial certification:

1. A letter or statement from the bank (or supporting agency) indicating an exact currency amount and its U.S. dollar equivalent that demonstrates the availability of adequate funding for at least the first year of studies.

2. A signed letter from the sponsor (family member or agency) indicating that the funds in that bank account will be used to support educational expenses at the University of Vermont.

For more information, contact Sarah Strouse, Office of International Education, L/L, B-161, Faculty Box 8, Burlington, VT 05405. Phone: (802) 656-4296. Fax: (802) 656-8553. E-mail: sstrouse@zoo.uvm.edu; www.uvm.edu/~oies.

Graduate Study at the University of Vermont International students interested in pursuing a graduate degree at the University of Vermont should contact: Graduate College Admissions Office, Waterman Building, University of Vermont, Burlington, VT 05405, (802) 656-3160.

NONTRADITIONAL STUDENT ADMISSIONS

The Admissions Office recognizes that candidates who have been out of formal schooling for a period of five years or more have life experiences that are different from traditional-age students.

While nontraditional candidates are expected to present strong academic credentials for admission, they can write to the Admissions Office to request a waiver of the standardized test score requirement, may adjust application essays to reflect their experiences, and may substitute a letter of recommendation from an employer or friend in lieu of the guidance counselor recommendation.

As with every applicant for admission, however, nontraditional candidates are required to present official documents of all academic work, including high school transcript and/or General Education Development certificate (GED). The Admissions Office looks for previous academic performance that would predict success at the University. Nontraditional applicants who are missing one or two requirements are reviewed on a case-by-case basis; if a record is otherwise acceptable, the Admissions Office may offer admission with a clause requiring completion of missing requirements prior to enrollment or concurrent with the UVM degree program. UVM does not grant college credit through portfolio assessment. Nontraditional candidates may explore credit options through the College Level Examination Program (CLEP) or through UVM's Credit by Examination.

Nontraditional learners considering a degree program at UVM may make an appointment with an admissions counselor to discuss the chances for admission. The Admissions Office is able to advise more accurately if individuals bring all academic records with them to the appointment. These documents are used for advising only and do not need to be official.

REAPPLYING TO THE UNIVERSITY

Applicants denied admission for a given semester may reapply for the following semester. Anyone reapplying must re-submit an application form, update any academic information, and send the appropriate application fee. Essays may be adjusted to reflect applicant's recent activities. These individuals should contact the Admissions Office to discuss academic work that would improve their chances for admission.

Under certain conditions, candidates offered admission who choose not to attend in a given semester can defer entry for up to two semesters with permission of the Admissions Office. After that period or if the admitted candidate failed to request deferred admission, another application and fee must be filed for review by the Admissions Office.

Former degree students at the University of Vermont who withdrew for any reason must see the dean of his/her former UVM college or school to request re-entry. The Admissions Office does not readmit former degree students.

RESIDENCY REGULATIONS

In-State Status Regulation

The Vermont Legislature has established a lower rate of tuition for students who are Vermont residents. These regulations define eligibility requirements for in-state status classification. All students at the University of Vermont shall be assigned an in-state or out-of-state status classification consistent with these regulations. Vermont domicile must be established for a student to be eligible for in-state status. Please refer to the following page for more information: www.uvm.edu/~uvmppg/ppg/student/regregulation.html.

ARTICULATION AGREEMENTS

Community College of Vermont/University of Vermont

CCV/College of Arts and Sciences

Students who have completed an associate's degree at the Community College of Vermont can be accepted to the University of Vermont's College of Arts and Sciences under the following conditions:

• Students must complete a minimum of 60 transferable academic credits pre-approved by UVM's Office of Transfer Affairs.

• Students must present a CCV grade-point average of 2.5 (on a 4.0 scale) or better.

• Candidates for the Articulation Agreement must meet UVM's minimum entrance requirements prior to CCV graduation.

• CCV students must initiate their degree program at UVM within two years of completing the CCV associate's degree.

• While at CCV interested students must sign a letter of intent to enroll at UVM.

CCV/College of Education and Social Services

Students who have completed a minimum of 30 transferable credits based on the transfer credit policy of the University of Vermont can be accepted into the College of Education and Social Services. The agreement includes the programs in Human Development and Family Studies, Social Work, Teacher Education programs in Art, Early Childhood Education, and Secondary Education.

- This agreement became effective in Fall 2001.
- Students must present a CCV grade point average of 2.5 (on a 4.0 scale) or better.
- Candidates must meet UVM's minimum entrance requirements or have prior approval from the College of Education and Social Services.
- To be eligible under the terms of the Articulation Agreement, CCV students must initiate their degree program at UVM within two years of completion of their courses at CCV. Faculty at both institutions will

cooperatively certify students as eligible under the terms of the agreement.
- Co-advisement by the appropriate CESS and CCV advisors is essential. Through co-advisement, CCV students may gain secure permission to enroll in beginning-level CESS courses at UVM while enrolled at CCV.
- While at CCV interested students must sign a letter of intent to enroll at UVM.

The Process Starts at CCV Current or prospective CCV students interested in this option should meet with a CCV advisor early in their college career to develop an Articulation Plan that outlines course work and ensures completion of any UVM requirements in English, foreign language, mathematics, science, and social sciences. At this time, students will provide transcripts of all previous academic work. This allows the CCV advisor to review the record and assess UVM entrance requirements and CCV course placement.

Admissions Process at UVM CCV Articulation candidates are encouraged to meet with a transfer counselor in the UVM Admissions Office to ensure course transferability. Candidates are asked to submit a completed Application for Admission and all financial aid forms by the stated UVM deadlines.

CCV students who have signed the Articulation Agreement do not pay UVM's application fee. Articulation candidates should include a brief statement in the UVM Application for Admission indicating they are applying under this option.

Candidates for UVM admission must submit official copies of all college course work attempted for credit, including the Community College of Vermont transcript. An official high school transcript is required only for candidates who must prove completion of all UVM entrance requirements prior to CCV entry.

UVM Admissions will review articulation student applications for the minimum GPA and entrance requirements. Offers of admission will be sent to those meeting the established criteria. To become a matriculated student at UVM, CCV articulation students must pay an acceptance fee/ advance tuition deposit by a date stipulated in the admission letter.

Candidates whose GPAs fall below the minimum will be reviewed by UVM on a case-by-case basis. Those denied acceptance are encouraged to meet with a transfer counselor at UVM to review future options.

For more information: For a current list of transferable CCV courses and UVM equivalents, contact a CCV Advisor or a Transfer Advisor in UVM's Office of Admissions.

Recipients of a CCV associate's degree prior to 1999 may contact the UVM transfer advisors for general transfer information.

CCV graduates interested in UVM programs outside the College of Arts and Sciences and the College of Education and Social Services are encouraged to meet with a UVM transfer counselor to discuss their academic history and potential for transfer admission.

New Hampshire Community Technical College of Claremont/Nashua/University of Vermont School of Nursing RN-BS-MS Program

Students who have completed the two-year Associate Degree in Nursing at NHCTC with a minimum of 62 semester hours of credit will be guaranteed admission to UVM's School of Nursing under the following conditions:

- Students must have a 2.5 (on a 4.0 scale) cumulative grade point average or better.
- Students must meet the School of Nursing's entrance requirements prior to graduation from NHCTC.
- To be eligible under this agreement, students must initiate their degree at UVM within two years of graduation from NHCTC.
- Candidates applying to the University of Vermont under this agreement do not pay the application fee.
- All students who do not meet the above conditions can apply for transfer admission and be reviewed on a case-by-case basis.

For more information about this agreement and course equivalencies, please contact the UVM School of Nursing at 802-656-3830.

St. Michael's College and UVM Articulation Agreement

St. Michael's College (SMC) and the University of Vermont in the fall of 1994 established an articulation agreement for a Dual Degree Program in Engineering ("the Program"). This agreement guarantees students who meet specified criteria admission to a prescribed program of study in engineering at UVM. Upon successful completion of the Program and degree requirements, students receive a Bachelor of Arts or Bachelor of Science degree from SMC and a Bachelor of Science degree in the appropriate engineering area from UVM. **Students will normally complete the Program in five years.**

The academic advising, admission, transfer of credits, enrollment, and monetary conditions in this agreement applicable to students will be carried out in accordance with the following policies and procedures.

1. Initial application to the Program will be made to SMC.
2. Students will enroll in the Program by declaring a pre-engineering major at the time of admission to SMC to permit them to complete all prerequisites in a reasonable time (see SMC catalogue for pre-engineering program).
3. Students may register for any of the options in the Civil, Electrical, or Mechanical Engineering programs.
4. Students enrolling under this Program will be considered SMC students throughout the duration of the Program. Once admitted to UVM according to the policies of this Agreement, they also become UVM students for the remainder of the Program.
5. For the first three years the host institution for students in the Program will be SMC, and for the last two years the host institution will be UVM. Tuition and fees will be paid to the host institution according to its normal policies (including residence status, financial aid, etc.) Tuition for courses taken at the other institution will be paid by the host institution transferring funds based on an agreed upon amount per credit hour.
6. While students are enrolled at a host institution they will be independently responsible for appropriate fees at the other institution on a per use basis.
7. Students in the Program will make a formal application to UVM by April 1 in the spring semester of their third year at SMC. Interested students should contact the pre-engineering advisor at SMC by November of the third year for information about the application process.
8. Students will matriculate at UVM and will be accepted to the appropriate engineering program at UVM once they have met the following requirements: (a) completion of at least 60 credits at SMC with an overall minimum GPA of 3.0 (only grades of C of above will count towards the 60 credits); (b) completion of Part I of the required pre-engineering courses at SMC, as specified in the Agreement (see SMC catalogue); and (c) comple-

tion of 11-12 credits of UVM engineering courses, including the following table of courses, with an overall minimum GPA of 2.0 in these courses.

Civil and Environmental Engineering (12 hours): CE 1, 10, 12; ENGR 2; ME 12.

Mechanical Engineering (11 hours): ME 12, 40; CE 1.

Electrical Engineering (12 hours): EE 3/81, 4/82; ENGR 2.

Union County Community College/UVM College of Arts and Sciences Articulation Agreement

Students who have completed an associate's degree at Union County Community College can be accepted into the University of Vermont's College of Arts and Sciences under an articulation agreement. Union County CC students who have completed a minimum of 60 transferable academic credits, based on the transfer credit policy of the University of Vermont, will be guaranteed admission under the following conditions.

- Students must have a grade point average of 3.0 (on a 4.0 scale) or better.
- Students must meet the minimum entrance requirements for the University of Vermont prior to Union County CC graduation.
- To be eligible under the articulation agreement, Union County CC students must initiate their degree program at UVM within two years of completing the Union County CC degree.
- Candidates applying to the University of Vermont under this agreement do not pay the application fee.
- All students who do not meet the above conditions can apply for transfer admission and be reviewed on a case-by-case basis.

For more information about this agreement and course equivalencies, please contact the Dean's Office in the College of Arts and Sciences at 802-656-3344

Vermont Technical College/University of Vermont Dairy Farm Management 2 + 2 Program Articulation Agreement

Students who have completed an associate's degree in the Vermont Technical College Dairy Farm Management program can be accepted into the University of Vermont's College of Agriculture and Life Sciences (CALS) in the Animal Sciences program, leading to a bachelor's degree. Transferable courses are limited to those directly comparable to UVM courses and meeting the requirements for both programs.

For acceptance, students must meet the following conditions:

- Students must have a 3.0 (on 4.0 scale) or better.
- Students must meet the minimum entrance requirements for the University and for the Animal Sciences program. A list of these courses can be obtained from the agreement coordinator in the College of Agriculture and Life Sciences.
- All students who do not meet the above conditions can apply for transfer admission and be reviewed on a case-by-case basis.
- The $45 application fee will be waived for students applying under this program.

For more information about this agreement and course equivalencies, please contact the agreement coordinator in the College of Agriculture and Life Sciences at 802-656-1397.

ADMITTED STUDENT INFORMATION

Acceptance Fee and Advance Tuition Deposits To reserve a space in the class or semester admitted, students should send the Admissions Office an acceptance fee and advance tuition deposit for $300 made payable to The University of Vermont.

First-time first- and second-year students are required to live in on-campus housing. Students admitted under Early Decision commit to attending UVM and must pay the tuition deposit by January 15. Transfer candidates and all candidates admitted for the spring semester will have a payment deadline printed with their acceptance materials. Housing is not guaranteed for transfer students.

A full refund of the acceptance fee and advance tuition deposit can be requested up to the payment deadline. After the payment deadline and up until the first day of classes, $100 of the payment is refundable.

Orientation All entering first-year students are required to attend a two-day orientation session in June. At Orientation, new UVM students meet with a faculty advisor, select first semester classes, and learn about living options in the residence halls. Information packets are mailed to incoming students' home addresses once they pay the acceptance fee and advance tuition deposit. Transfer students attend a session just prior to the beginning of the fall semester.

Transfer or first-year students entering in the spring semester receive information about a special spring orientation session once they pay the deposit.

Housing First-year and second-year students are required to live in on-campus housing. Entering students explore living options at orientation and are allowed to list residence hall preferences. The Department of Residential Life mails room assignments prior to the beginning of each semester.

Class Registration The academic advisor at Orientation helps prepare the first semester class schedule. First-year students entering fall semester register for classes at June Orientation. First-year students entering in the spring and transfer students entering either semester meet with an academic advisor at an Orientation session and may need to formally register for classes at that time.

Immunization and health history forms are sent directly to newly-admitted students and are due in the Center for Health and Wellbeing – Student Health/Medical Clinic by June 30 of the year of entry. Vermont state law requires proof of two doses of live measles vaccine after the student's first birthday.

Student Expenses

The student expenses outlined in the following paragraphs are anticipated charges for the academic year 2002-03. Changing costs may require adjustment of these charges before the beginning of the fall semester. Please refer to our web page for current information: http://www.uvm.edu/~studentfinances.

UNDERGRADUATE TUITION AND FEES

APPLICATION FEE

A nonrefundable application fee of $45 is charged each applicant for admission to a University degree program.

ACCEPTANCE FEE AND ADVANCED TUITION PAYMENT

All new undergraduate applicants who have been accepted by the University are required to pay $300 in order to reserve a place in the next enrolling class. Regular first-year students accepted for the fall semester must pay the deposit by May 1. Most transfer students admitted for the fall must pay the deposit within two weeks of the offer of admission. Students admitted in January for the spring semester may have less than two weeks in which to pay the deposit. A portion of the fee is for initial advising, selection of courses, and personal orientation to the campus, a requirement for all incoming undergraduate degree students. The remainder will be applied to the initial semester's tuition bill.

If a newly admitted student who has paid the required deposit subsequently chooses not to attend the University, the student will receive a $100 refund if the University is notified in writing prior to the beginning of the semester for which the student was admitted. If the University is notified after the beginning of the semester, the entire deposit is forfeited.

ESTIMATED YEARLY EXPENSES

Listed below are estimated expenses (excluding transportation, laundry, and spending money) based on the regular tuition for undergraduate students followed by a explanation of these charges.

	Resident	*Nonresident*
Tuition	*$8,320*	*$20,810*
Housing (Double Room)	*4,232*	*4,232*
Meal Plan (Average)	*2,146*	*2,146*
Comprehensive Student Fee	*654*	*654*
Inter-Residence Association Fee	*20*	*20*
Student Accident & Sickness Insurance (Optional)	*974*	*974*

Note: *Students and families who are borrowing funds for educational purposes may have additional expenses, such as loan origination fees.*

TUITION

Vermont Residents: $347 per credit hour through 11.5 hours. From 12-18 credit hours — $4,160 per semester plus $347 per credit hour for each hour in excess of 18 hours.

Nonresidents: $867.00 per credit hour through 11.5 hours. From 12-18 credit hours — $10,405 per semester plus $867.00 per credit hour for each hour in excess of 18 hours.

Note: Courses taken for audit are also included in determining the number of credit hours for which a student is billed.

HOUSING CHARGES

Room and Board: All housing agreements include both room and board and are legally binding for the nine-month academic year. Each occupant is liable for the yearly rent, one half to be paid each semester.

The University meal plan offers several options. Payment for the plan selected is made in two equal installments paid at the beginning of a semester. The University's food service system includes not only dining halls but also the various campus snack bars, restaurants, and grocery stores. Questions regarding food services should be directed to the University Dining Services/Marriott, Robinson Hall, Redstone Campus.

Students not required to live on campus who wish to cancel a housing agreement must do so in writing. Students cancelling before July 1 will be assessed a $50 penalty and from July 1, but before September 2002, a $150 penalty. Unless specifically authorized by the Office of Residential Life, no room cancellations will be honored after the beginning of the fall semester.

COMPREHENSIVE STUDENT FEE

This fee is used to cover the operating, capital costs, and improvements of the Library, Student Center, Athletic Complex, Center for Health and Wellbeing, and Campus Transportation services.

INTER-RESIDENCE ASSOCIATION (IRA) FEE

A $20 per year ($10 per semester) fee is charged to each resident to be used for activities within the residence hall system.

STUDENT INSURANCE (Optional)

Students have the option of purchasing a Student Accident and Sickness Insurance Policy through the University. This policy provides coverage for many services not included in the health fee as well as hospitalization benefits. To participate in this program, the student must pay a modest annual premium plus the health fee for the two semesters of the academic year. Students not covered by the health insurance policy of a parent, guardian, or spouse must purchase the Student Accident and Sickness Insurance Policy.

STUDENT GOVERNMENT ASSOCIATION FEE

Undergraduate degree students enrolled in four or more credit hours are charged a fee of $100 per year ($50 per semester). This fee is allocated by the Student Government Association toward the support of student organizations and student activities.

FEES FOR PART-TIME STUDENTS

A comprehensive fee is charged to all part-time students enrolled in four but less than 12 credit hours in a semester, as follows:

Hours Enrolled Per Semester	Fee
4	$58
5	68
6	76
7	86
8	96
9 to 11.5	104

All undergraduate degree students enrolled in four or more credit hours in a semester pay the full Student Government Association fee.

BOOKS AND SUPPLIES

The estimated yearly cost of books and supplies at $670 is a low average. Some particular curricula may require one-time purchases which will change this amount.

Students in the College of Engineering and Mathematics and School of Business Administration should add about $100 for computer software to their estimated yearly costs for books and supplies.

Dental Hygiene students should add approximately $1,500 for an instrument kit and clinical attire in the first year that will be collected during the first week of the fall semester.

Physical Therapy students will be responsible for the cost of medically-required vaccinations, transportation, and living expenses (including room and board) during clinical affiliation periods. All Physical Therapy students are required to carry professional liability insurance prior to enrolling in the clinical experience.

Nuclear Medicine Technology and Radiation Therapy students should add about $85 for lab coats and other related expenses.

Professional Nursing students should add about $250 for clinical attire, professional liability insurance, health screening, vaccinations, and other related expenses in the second semester of the sophomore year and about $300 in the beginning of the junior year.

Students enrolled in art courses should expect to incur a lab or materials cost roughly equivalent to the cost of books in other courses. In certain courses, instructional materials are purchased in bulk by the department and costs are prorated among students at a far lower rate than if they were purchased individually.

OPTIONAL FEES

Locker-Towel Fee

All students enrolled in physical education activity courses and others who wish to have an assigned locker must pay a locker-towel fee each year or any portion thereof. This fee provides a locker and a clean towel after each use of the gymnasium facility.

UNIQUE FEES

College of Engineering and Mathematics and School of Business Administration

All new first-year and transfer students entering programs in the College of Engineering and Mathematics and the School of Business Administration are required to purchase a microcomputer. Details on the costs and the machine specifications are provided to the student at the time of admission. Students eligible for financial aid can have the cost of the microcomputer acquisition and maintenance built into their financial aid package.

Credit by Examination

A fee of $50 per credit hour will be charged for administration of special tests in areas for which academic credit may be received. This fee must be paid in advance.

Fees for Courses in Music Performance Study

Private instrumental and voice lessons, group voice classes, and group beginning piano classes are available each semester. Private lessons are one-half hour or one hour (for one or two credits) over a 15-week period. Group lessons consist of two 50-minute classes per week over a 15-week period (one credit).

$185 per credit will be charged each student (for one or two credits). This is in addition to the tuition charged and will be part of normal billing.

Any student enrolled in excess of 18 credit hours will be charged only the $185 per credit hour for private lessons and not for additional tuition charges for the Music Performance Study course. Any other University courses(s) that result in more than 18 credit hours of enrollment will be subject to the additional applicable per credit hour tuition charges.

School of Natural Resources Summer Field Courses

The tuition for the School of Natural Resources Summer Field Courses will be at the Summer Session credit hour rate. In addition, there may be charges for field expenses.

School of Nursing

An additional fee of approximately $28 annually will be charged each student for membership in the National Student Nurses Association and will be part of normal billing.

Additional Fees for Special Courses

Occasionally, a special fee will be charged in addition to the fee for tuition to cover long distance travel expenses, special equipment, arrangements, or skilled consultants. Students will be notified of this fee through the registration process.

Study Abroad

A $400 administrative fee will be assessed for those students participating in Study Abroad programs/activities with the exception of the Buckham Overseas Studies Program.

Diagnostic Evaluation

In certain instances, students may be assessed a fee for diagnostic testing. Additional information can be obtained from the Office of Specialized Student Services.

PAYMENT OF OBLIGATIONS

The Touchtone registration system will generate charges based on enrolled credit hours. All tuition, fees, and room and board charges are payable in full upon notification. Degree students who enroll in advance for courses will receive itemized statements of applicable semester charges at their permanent addresses about a month prior to the commencement of classes, with instructions to settle in full by a specific date (generally three weeks before classes begin). Advanced payments are accepted; checks should be made payable to The University of Vermont. Any checks or payments received by the University may be applied to any outstanding balances.

Students who cannot meet their financial obligations because of unusual circumstances should contact the Student Office of Student Financial Affairs as soon as possible before the payment due date. Students who are allowed a Monthly Payment Plan or a postponement of all or a portion of their financial obligation will be charged a $75 Monthly Payment Plan service charge per semester or $130 for a year plan.

Students who have not satisfactorily completed financial arrangements by the announced due date may have their enrollment cancelled. Disenrollment will automatically place a registration hold on a student's account that will prevent re-enrollment until the student has contacted Student Accounting to discuss the account. A $50 fee must be paid to allow reregistration.

The University reserves the right to withhold registration material, the diploma, degree, and all information regarding the record, including transcript, of any student who is in arrears in the payment of tuition, fees, or other charges, including, but not limited to, student loans, dining and housing charges, telephone toll charges, and parking fines.

If a student leaves the University for any reason with an outstanding balance and this balance is not settled in a timely manner, the University may turn the account over for collection. If this is done, any additional collection fees, legal fees, and other costs and charges necessary for the collection of this debt will be added to the outstanding balance.

LATE PAYMENT SERVICE CHARGE

Students who do not settle their accounts by the due date will be charged a late payment service charge. Please refer to the Payment Information and Financial Policies information on the following web page: http://www.uvm.edu/studentfinances.

BUDGETED PAYMENT

The University offers a Monthly Payment Plan to parents who desire to budget annual costs in monthly installments. Specific information is mailed to parents of incoming and returning students in the spring by the Office of Student Financial Services.

BILL ADJUSTMENT AND REFUND POLICIES

ACCEPTANCE FEE AND ADVANCE TUITION PAYMENT FOR NEW STUDENTS

A newly admitted undergraduate student who decides not to attend, and who notifies the University in writing prior to the first day of classes, will receive a refund of $100 of the $300 payment (acceptance fee of $186 and advance tuition payment of $114) that was required to reserve a place in the class.

CANCELLATION, WITHDRAWAL, MEDICAL WITHDRAWAL, SUSPENSION, DISMISSAL

A student who cancels, withdraws for personal or medical reasons, is suspended, or is dismissed will receive an adjustment of charges in accordance with the following schedule. Medical withdrawals require approval of the University Student Health Center.

— 100% tuition and fees credit adjustment prior to the end of the first two weeks of classes.
— 50% tuition and fees credit adjustment through the third week of the semester.
— 25% tuition and fees credit adjustment through the fourth week of the semester.
— No adjustment after the fourth week of the semester.

Due to federal requirements, financial aid recipients who withdraw during the semester will receive their refund based on current federal guidelines.

Note: The effective date of any cancellation or withdrawal is the date the student initiates the withdrawal process either in writing, in person or over the phone. In no case will an adjustment be made after the first day of classes of the following semester.

CHANGES IN CREDIT HOUR LOAD

A student who adds courses during the semester will be billed additional tuition and fees applicable to the adjusted credit hour load. A student who drops courses during the semester will receive a tuition credit based upon the effective date as described above. A student who withdraws from a course during the semester will receive a tuition credit based upon the effective date as described above. However, the course will remain on the student's record.

REFUND OF OTHER CHARGES

Room and meal plan payments will be refunded on a prorated basis.

DEATH

In the case of a student's death, tuition, room, and fees will be fully refunded for the semester during which the death occurs. Unused meal points will be refunded.

Financial Aid and Scholarships

The University has many programs to help finance a UVM education. These include financial aid awards for students with a demonstrated need for financial assistance and Scholarship awards for students whose academic achievements and other accomplishments and qualities promise to enrich the University in exceptional ways. Please visit our website at: http://www.uvm.edu/financialaid/?Pagesuvmscholarship.html.

FINANCIAL AID

In order to ensure that the financial aid application process is understandable and accessible, each applicant is assigned to a "service- team" within the Financial Aid Office. Whenever a student has a question about his or her financial aid status, he or she may call upon the members of the service team who will be familiar with the applicant's particular circumstances.

Student's Last Name	Phone/E-mail
A-F	802-656-8530 team.a-f@uvm.edu
G-M	802-656-8531 team.g-m@uvm.edu
N-Z	802-656-8532 team.n-z@uvm.edu
Scholarship Coordinator	802-656-8574 scholarships@uvm.edu

Eligibility

Students who wish to be considered for assistance in meeting their University expenses with student loans, grants, or employment should consider applying for federal, state, and University financial aid. To be eligible to apply for financial aid, a student must be a U.S. citizen or a permanent resident. (Limited financial aid funding is available for international students; inquiries should be made to the Scholarship Coordinator in the Admissions Office.) To be considered for aid, a student must also be enrolled at least half-time (six credits) in a degree program. Audited credits or Credits by Examination cannot be considered as part of the credits in determining financial aid eligibility.

Application Procedures

Incoming first-year and transfer students who wish to apply for aid may do so by completing and mailing the Free Application for Federal Student Aid (FAFSA) after January 1st; and providing any verification documentation requested by the UVM Office of Financial Aid. Preference is given to those students who submit their applications by March 1. Applications submitted after that date will be processed in chronological order, subject to the availability of funds. In addition to following the procedures listed above, all students should apply to their state financial aid grant agency for assistance. Vermont students should apply to the Vermont Student Assistance Corporation (VSAC), P.O. Box 2000, Champlain Mill, Winooski, VT 05404.

The Financial Aid Package

The University of Vermont participates in all federal and state financial aid programs and must adhere to their requirements. Additionally, the University makes available a variety of grant and loan opportunities from its own operating and endowment funds. While federal and state aid is based exclusively on student need, eligibility for University funds is based on student need and on the strength of the applicant's academic record. Applicants will be considered for all aid programs for which they are eligible. Aid is most often awarded in combinations or "packages" of the various types of aid. Almost all awards will include some student loan.

Student loans are available to all students regardless of need in the form of Unsubsidized Federal Stafford Loans. To be considered, however, a student must APPLY for aid. After a determination of eligibility has been made by the Financial Aid Office, students will be notified if they qualify for "need-based" aid or for an Unsubsidized Federal Stafford Loan.

In the awarding of UVM institutional financial aid funds, a student's academic record is taken into consideration. Federal and state financial aid funds are allocated solely on the basis of student and parent financial need.

Satisfactory Academic Progress Standard for Financial Aid Recipients

In order to maintain eligibility for federal Title IV financial aid, matriculated undergraduate and graduate students must progress at a rate that ensures completion of their degree programs within a reasonable time frame. Beginning with the first semester of study in a degree program at The University of Vermont, a federal financial aid recipient is required to accumulate earned hours totaling at least 75 percent of the number of hours attempted. Each student's progress will be measured at the end of each year of attendance to ensure adherence to this standard.

Beginning with the third academic year (after the achievement of 60 credit hours), all students must have attained at least a 2.0 overall cumulative grade-point average in order to continue to qualify for assistance.

Any student not meeting the standard described above will be placed on Financial Aid Probationary Status for a one-year period (during which aid eligibility will be maintained). Should the student not meet the required credit standard or cumulative grade-point average standard by the end of that probationary year, the student's eligibility for additional federal financial aid will be withdrawn until the required standard has been met. Institutional aid will be suspended until eligibility for federal aid has been restored. Following federal guidelines transfer credits are not part of this calculation.

Students whose aid is withdrawn for not maintaining academic progress according to the standard outlined above may appeal their loss of aid by writing to their financial aid service team. The decision to withhold aid eligibility may be overridden by the Director in conjunction with the Financial Aid Appeals Committee in circumstances which warrant special consideration. Such circumstances may include medical emergencies or family crises which resulted in the student's not meeting the stated requirements.

Financial Aid Refund Policy

A student who cancels, withdraws for personal or medical reasons, is suspended or is dismissed will receive an adjustment of charges in accordance with the following schedule. Medical withdrawals require approval of the University Student Health Center.

• 100% tuition and fees credit adjustment prior to the end of the first two weeks of classes.

• 85% tuition and fees credit adjustment through approximately 30 percent of the semester.

• 60% tuition and fees credit adjustment through approximately 60 percent of the semester.

• No adjustment after the 60 percent point of the semester.

Note: The effective date of any cancellation or withdrawal is the date the student's dean receives such notification in writing. The dean may recommend to the Registrar that an exception be made to this policy only in extenuating circumstances. In no case will an adjustment be made after the first day of classes of the following semester.

Changes in Credit Hour Load

A student who adds courses during the semester will be billed additional tuition and fees applicable to the adjusted credit hour load. A student who drops courses during the semester will receive a tuition credit based upon the effective date as described above. A student who withdraws from a course during the semester will receive a tuition credit based upon the effective date as described above. However, the course will remain on the student's record. Financial aid will be reviewed and adjusted for any changes to the course load.

SCHOLARSHIPS

Thanks to the generosity of UVM alumni, parents, and friends, a number of scholarships are available to students whose experiences and backgrounds promise to enrich the larger university community. While many of these scholarships are based on a combination of need and merit, several scholarships are offered exclusively on the basis of academic achievements and potential for success at UVM. Examples of scholarships available to new students include:

The Vermont Scholars Program Each year, UVM names a select group of outstanding Vermont high school students as Vermont Scholars, an academic honor that carries a four-year partial scholarship. To qualify, candidates generally rank in the top ten percent of their graduating class and present superior scores on the Scholastic Assessment Test (SAT I). Comparable ACT scores are acceptable.

A committee comprising members of the University community reviews all qualified applicants and bases final selection on such factors as secondary school record, recommendations, admissions essays, extracurricular participation, and academic potential. Scholarship recipients are notified by mid-March.

Vermont Scholars receive between $1,250 and $8,000 annually in scholarship and grant assistance, depending on need. The scholarship is renewable up to four years (eight semesters) provided a 3.00 cumulative grade-point average is maintained.

The Green and Gold Scholars Program recognizes the academically strongest student at each accredited high school in Vermont with 4-year, full tuition scholarships, currently valued at over $33,000. At the end of the academic year, the Principal of each school submits a nominee who has completed the 11th grade at the end of the school year. The primary criteria for determining a nominee is limited to academic performance in high school, including rank in class, grade point average, rigor of course work and standardized testing. Green & Gold nominees are awarded four-year full tuition scholarships upon admission to the University. The scholarships are renewable annually providing that the recipient maintains a 3.00 overall grade point average and makes satisfactory progress toward degree completion while in attendance at the University.

UVM Community Service Award The UVM Community Service Award is available for Vermont residents who have a demonstrated commitment to community and public service. The University Scholarship Committee selects those students that have a proven track record of community service. Community Service Scholars receive between $1,000 and $8,000 annaully in scholarship and grant assistance, depending on need. Recipients must maintain at least a 2.50 cumulative grade-point average and continue to perform community service while at the University.

Presidential Scholarship Vermont and out-of-state students with a superior record of scholastic achievement are eligible for consideration for UVM Presidential Scholarships. Letters of recommendation, secondary school record, and extracurricular participation are among the criteria used in making scholarship selections. Presidential Scholars receive a merit scholarship for four years (eight semesters) providing they maintain a cumulative 3.00 grade-point average and continue to make satisfactory progress toward the completion of their degree requirements. Scholarship values vary according to the academic record of the recipients.

How to Apply for UVM Scholarships

There is no separate application process for most UVM-based scholarships. The wealth of information provided in the Admissions application is used in matching students with available scholarships. Additionally, students must file the Free Application for Federal Student Aid (FAFSA) in order to be considered for need-based scholarships. Students will be notified if additional information is needed to apply for a specific scholarship.

Other Scholarship Resources:

• The Financial Aid Office, located at 330 Waterman Building, dedicates a scholarship resource workspace that can be utilized by any entering or returning UVM student. Resources such as scholarship and grant search books, a computer for reviewing free scholarship websites, and records on a small number of scholarship opportunities forwarded to UVM from outside sources are available for interested students.

• VSAC (The Vermont Student Assistance Corporation) offers a guide to scholarships for Vermont students available in UVM's Financial Aid Office or contact VSAC toll-free at 1-800-642-3177.

• The Army ROTC Program offers an opportunity for students to earn a degree of their choice and possibly qualify for an officer's commission. Two-, three- and four-year scholarships are available worth up to $17,000 for tuition and books as well as $206/month for up to ten months.

• Veterans are encouraged to consult the UVM Registrar's Office regarding G.I. Bill benefits in education.

• Many organizations within home communities offer a wide range of scholarships to needy and deserving students. Check with schools and communities for these opportunities.

Student Services

A student's commitment to strong academic performance coupled with healthy out-of-class pursuits forms the basis for a successful college experience. The units listed and described in this section are meant to acquaint students with some of the offices, services, and programs that offer support for student endeavors, needs, and interests. More detailed information is available in the UVM student handbook, *The Cat's Tale*, which can be accessed on the internet http://www.uvm.edu/~dosa/handbook/.

COMPUTING AND INFORMATION TECHNOLOGY

The Division of Computing and Information Technology (CIT) provides computing, networking, and telephone service for the UVM community. CIT support includes the following:

- Full Internet access, including electronic mail and Web access. The UVM network is available throughout campus, including residence hall rooms. Off-campus students have a choice of free basic dial-up access, or specially priced full Internet access. UVM is a member of the Internet 2 Consortium.
- A variety of servers and host systems. Students use an IBM AIX (Unix) server cluster named "Zoo" for e-mail, Web publishing, statistics, geographic information systems, and research. From the time students are admitted, they are eligible for Zoo accounts.
- Computing labs equipped with Macintosh, Window, and X-Windows (Unix) workstations. Labs are staffed by consultants and equipped with software for word processing, spreadsheets, statistics, scientific visualization, and a powerful geographic information system. All labs are networked to UVM's host systems as well as to national and international resources available through the Internet. For advanced computing needs, the Academic Resource Facility (the ARF) is quipped with specialized hardware for exploring and developing computing, visualization, and multimedia applications.
- Sales and service for the Macintosh and Windows personal computers from major vendors. Students can purchase Macintosh and Windows computers from the UVM Microcomputer Services Depot (see http://cit.uvm.edu/mcsv/ for details). These systems are configured to work on the UVM network and come with the most comprehensive support UVM provides.
- A digital telephone system, including voicemail for all on-campus students, faculty, and staff.
- Free publications, tutorials, consulting support, and a help line.
- E-Business for students, faculty, and staff, including Web registration, billing, and grade reports.
- Support for the WebCT™ e-learning platform, where many courses and course components are offered online.

Many other University departments provide specialized computing resources designed to meet the needs of specific programs.

Contact CIT by sending e-mail to cit@uvm.edu, or visit our Web site at http://cit.uvm.edu.

ACADEMIC SUPPORT PROGRAMS

Academic Support Programs offer a range of services to support students' academic success, including study skills and subject-area tutoring with emphasis on introductory courses and writing assistance in any discipline. Supplemental Instruction (SI) assists students in large lecture courses. In SI sessions, small groups of students meet after class to review course material and learn how to apply study skills to specify subjects.

Any student currently enrolled in classes at UVM is eligible to use Academic Support Program services. The office is centrally located at 244 Commons, Living/Learning Center. For more information, stop by or call the office at (802) 656-4075. The extended office hours are Monday to Thursday 8 a.m. to 9 p.m.; Friday 8 a.m. to 5 p.m.; Sunday 6 p.m. to 9 p.m.

TRIO Program TRIO includes two project dedicated to the educational and cultural advancement of its participants:

Project STAY (Services To Advance Yourself) is a student services project that provides academic support to 225 UVM undergraduate students through the above Co-op programs and through classes, mentoring, laptop lending and graduate school programs and more.

Upward Bound provides academic and cultural support to 60 Vermont high school students.

Participants in the TRIO projects must be first generation college students; have limited income; and/or (for Project STAY) have a documented disability.

Services for Students with Disabilities Services and accommodations for students with disabilities are coordinated by three offices: ACCESS works with students with physical disabilities (visual, hearing, mobility, and/or manual dexterity impairments), learning disabilities, and attention deficit disorders; the Counseling Center serves students with psychological disabilities; and the Student Health Center provides services for students with ongoing medical conditions.

Students are encouraged to inform the staff of the appropriate certifying office of any needed services or accommodations well in advance of each semester. Current and comprehensive documentation of disability will be required. For further information, contact:

ACCESS, A170 Living/Learning Center, (802) 656-7753, TTY 656-3865.

Counseling Center, 146 South Williams Street, (802) 656-3340.

Student Health Center, 425 Pearl Street, (802) 656-3350.

CAREER SERVICES

Career Services provides UVM students with assistance in exploring and implementing their career goals. There are four major components in this effort: understanding one's own strengths and career needs, discovering related work and educational options, validating those options through related experience, and pursuing specific post-graduate goals. The Career Services Office is located in E Building, Living/Learning; the web address is http://career.uvm.edu.

Career Assessment Students often want assistance in identifying their strengths and career needs, and in discovering the best major for them or the kind of employers and openings that might be good options. *Career Counselors* administer assessment tools, lead workshops and

meet individually with students to help them set goals related to career, graduate school or even undergraduate major interests. To see a career counselor, call ahead on the day you wish to stop by with quick questions for a *Same-Day Consultation* (M-F 1:30-4:30 p.m. and Wednesdays 5-7 p.m. during Fall and Spring semesters) or plan ahead for an *hour-long Career Counseling Appointment.*

Discovering Options Surveys of UVM graduates, publications on careers related to certain majors, and books on careers in specific interest areas (such as environment, media, sports, human services, health) are available in the Career Library in Living/Learning. Every year, students can attend workshops and panels, presented by UVM grads, discussing options for students in any number of majors. At Career Services you will also find contact names of over 800 participants in UVM Career Connections, a network of UVM alumni who have volunteered to provide information to students interested in working in their fields or geographic locations.

Getting Experience At UVM, we want all students to test their interests in particular fields by getting experience before they graduate. Because employers are expressing interest in hiring college graduates who have relevant work skills, there is even more reason to get experience before finishing a baccalaureate degree. To support students' needs in this area, many campus leadership and research opportunities are available. Career Services has also developed a number of useful programs and services.

Federal Work Study job openings are managed through Career Service. Students who have received a Work-Study award through the Office of Financial Aid can use their employment to gain valuable skills and test their career interests. Openings range from medical photographer to editorial assistant, from technology consultant to dance instructor, and from environmental field worker to research assistant. These positions are located on campus as well as off-campus in non-profit agencies.

Career Internship s are local, regional, national, and international openings catalogued at Career Services. Available to students from any major, at any time in their academic careers, the internship listings cover a wide range of fields. Most of these openings are unpaid; students who are interested in earning academic credits must make arrangements within their academic departments.

The ***Cooperative Education*** program is nationally sanctioned and allows students to alternate full- or part-time paid employment with periods of classroom education. Coop provides in-depth experiences (6-18 months) as close to campus as Burlington and as far away as Boston, Minnesota, and Florida. Participating students usually major in computer science, engineering, math, or business.

Natural Resources Internships are paid or unpaid experiences designed in collaboration with the faculty in the School of Natural Resources and environmentally-related employers in business and non-profits. Academic credit is available for SNR students. Call (802) 656-3003 for more information.

The ***Service Learning Internship Program*** provides opportunities for credit-bearing internships. While students serve real needs in the community, they link their experiences with structured academic learning. Options include openings in health and human services, law and justice, government and legislative, arts, environmental, and educational settings. These experiences vary in length and can be local, national or international. Staff provide coordination and support throughout the students' experiences.

The ***Student Employment Services*** posts summer and part-time job openings of interest to UVM students.

Pursuing Goals Career Services staff are available in workshops and individually (through appointments and same-days) to assist students with implementing goals.

Employment workshops are held each semester to teach students job search skills such as resumé writing, interviewing, developing networks and contacts, and building a comprehensive job search strategy. ***UVM Career Connection*** advisors often act as contact and referral sources for job seekers. To provide students with 24-hour access to job openings and information about employers, Career Services has a Web site at http://career.uvm.edu.

Our ***On-Campus Interviewing*** program, which posts hundreds of jobs annually, brings organizational representatives from small, medium, and large, local, regional, and multinational employers to UVM to conduct job interviews with UVM students. In addition, Career Services hosts job fairs each academic year, including the *Technical Career Fair* in the fall, the Career Expo in the winter, and the *Summer Jobs & Internship Fest* in the spring.

Because employers do not always have time to post a job and wait for applicants, UVM offers students the opportunity to register for our ***Resume Referral Service.*** To sign up, students fill out a brief form indicating their interests and skills, provide us with resumes, and give us permission to mail them out. Participants are then entered into our database which can be queried when quick requests for resumes are received. An additional option is to register with and submit a resume to eXperience.com, a web-based tool that connects job seekers with a wide variety of regional, national and international employers. Call 802-656-3450 for more information on how to participate in either of these programs.

Searching for a job in government, human services, advocacy organizations, and other nonprofit groups can be daunting. The ***Non-Profit Employment*** advisor provides assistance to undergraduates and alumni on careers, job search skills, and networking strategies in the public interest sector. Information on local, regional, national, and international nonprofit employers and fellowships are available in our Career Library, and hundreds of post-graduation public interest employment opportunities are posted annually.

Preprofessional/Graduate School Advising supports students interested in law, medicine, dentistry, optometry, podiatry, and osteopathy, and other graduate programs. Intended to supplement faculty advising, the career center provides registration materials for the required graduate and preprofessional examinations and application services, as well as reference materials that index funding sources, evaluate schools, and explain application procedures. Career counselors assist students in honing their interests and setting goals relative to graduate education and beyond. The ***Premed and Prelaw Advisor*** and faculty members of the Premed and Prelaw committees assist students in planning their undergraduate curricula and gaining admission to programs.

Multicultural Programs

CENTER FOR CULTURAL PLURALISM

The Diversity & equity Unit at the University of Vermont, headed by the Senior Advisor to the President, is comprised of four departments:

- The ALANA Student Center
- The Center for Cultural Pluralism

- The Office of Lesbian, Gay, Bisexual, Transgender, Questioning and Ally Services
- The Women's Center

The Unit provides training, services and programs in support of the University's commitment to the admission, hiring and retention of a diverse community of faculty, staff and students.

The currency of value in education for the 21st Century must include multicultural competencies in order to produce graduates equipped to be leaders and change agents in a pluralistic world. Staff in the Diversity and Equity Unit work collaboratively with all members of the educational community to help the University of Vermont achieve these goals.

The ***ALANA Student Center*** is located on the University of Vermont's Redstone Campus and its facilities include a kitchen, conference room, computer lab, and a community room. The building is available to students 24 hours a day.

The mission of the Center is to provide support for African American, Latino/a, Asian American, Native American (ALANA) students by nurturing their academic, cultural, emotional and social development. The Center's staff further strives to promote community awareness and help create a just multicultural campus climate. The ASC staff works closely with the Office of the Vice President for Student Affairs, Career Services, Residential Life, and Admissions as well as academic departments. The Center is concerned with quality of life issues for ALANA Students because of the profound effect such issues have on the academic success of students of color at predominately white institutions.

Office hours are 8:00-4:30 Monday through Friday. For further information, please call: (802) 656-3819.

The ***Center for Cultural Pluralism*** supports the development of the skills of critical analysis and intercultural awareness in relationship to social justice issues. Its mission is to provide resources and assistance in the delivery of quality multicultural education in order to equip faculty, staff and students with the competencies necessary to function in a diverse world.

The focus for the Center includes the following areas: academic, administrative/staff, student affairs and community outreach. The Center is the major coordinator of activities that support UVM's efforts to provide a campus climate based on equity, respect for all, and the understanding of social justice philosophy. In direct support of this goal the Center for Cultural Pluralism is involved in formal education, professional development, programming, funding support, and support services as related to these four areas. It offers a central meeting place – a "Cultural Hub" – where individuals and organizations working on multicultural awareness and social justice meet and interact with one another. The Center provides classroom space and houses the following organizations: English as a Second Language Program, Office of Conflict Resolution, Cooperative Campus Ministries, Hillel, LGBTQA Services and Asia Program faculty.

Open from 8 a.m. to 4:30 p.m. Monday through Friday, the Center supports and initiates educational and social events. The Art Gallery hosts exhibits featuring work that address cultural diversity or social justice themes. The Resource Library has print and video on multicultural topics available to University and community members. Five meeting spaces can be reserved by calling (802) 656-8818 during office hours. Visitors are always welcome.

The Office of Lesbian, Gay, Bisexual, Transgender, Questioning and Ally Services exists to assist the University of Vermont in meeting the needs of LGBTQ&A staff, students and faculty for full inclusion and representation in the University community. LGBTQ&A Services staff provide consultation and training to all departments of the University as needs are identified as well as in targeted areas of importance to LGBTQ&A students, staff and faculty. The Office articulates LGBTQ&A issues and perspectives in decisions regarding University policies and programming and promotes awareness and understanding among all members of the University community.

The Office and staff also serve as a point of coordination for the LGBTQ&A community on campus by fostering and supporting LGBTQ&A programming and by managing a LGBTQ&A listserve and web page.

A full-time Coordinator, graduate interns and work-study students staff the office, which includes a resource lending library. It is located on the third floor of the Center for Cultural Pluralism at 461 Main Street and may be reached at (802) 656-8637. Scheduled hours are 9:00 to 5:30, M-F, but may vary according to availability of staff.

The ***Women's Center*** is open to all members of the UVM and Burlington communities. The Center focuses on educational programming, resource development and referrals, outreach, and advocacy on issues affecting women. Responding to students, faculty and staff, the Center works to ensure a hospitable campus climate for women and other under-represented groups. Programming is also done in collaboration with local agencies and community groups. The Center provides leadership development for students through employment, internships, and volunteer opportunities.

In addition, a Victim Advocacy Program, funded by the Department of Justice, provides free and confidential assistance to any member of the University community who believes he/she has been a victim of gender violence, on or off campus. Based at the Women's Center, the program is a collaborative effort with local victims service agencies, the School of Nursing and the College of Medicine. Support, direct services and referrals, for males and females, as well as their friends and families, are offered.

The Women's Center provides a meeting place for classes and for groups working toward gender equity and cultural diversity. The Center has a lending library and a fully-equipped kitchen for use by individuals or groups. The phone number for the office is 656-7892.

Campus Life

OFFICE OF STUDENT LIFE

The work of Student Life begins with new students' Orientation to the University, continues by assisting students in planning co-curricular experiences, and extends to numerous recognition programs for graduating seniors. More information is available on-line at http://www.uvm.edu/~dosa/studact/, or from the Student Life Office in Billings Student Center. Programs supported by the Office of Student Life include:

Orientation and Parent Relations Orientation provides the official welcome to parents and students to the University through summer orientation programs and Homecoming and Family Weekend in the fall. Orientation programs challenge students to explore numerous dimensions of campus life and to get significantly involved in the University and local community.

Leadership Programs engage students in experiential leadership education. Central programs include leadership classes (EDHI 213 and 214), the Emerging Leaders Program, Women as Leaders Workshops Series, Leadership Recognition, KUDOS! Leadership TREK, and campus-wide leadership retreats.

Greek Life Fraternity and sorority life is an important option for many UVM students. This area of endeavor supports the activities of the Interfraternity Council, the Panhellenic Council, Order of Omega (the Greek academic honor society), the Greek Judicial Board, individual chapters, the Greek Alumni Advisory Council, and the Fraternity Manager's Association. Currently there are 10 fraternities and five sororities.

Community Service and Volunteer Programs The spirit of community service is an integral part of campus life for many UVM students, faculty, and staff. This area includes Community Service TREK (for new students), the broad-ranging efforts of Volunteers in Action (VIA – a consortium of 13 individual community service programs), Hearts and Hands, Alternative Spring Break, Make a Difference Day, Community Serv-a-thon, Community Works and many other links with the local community.

Outdoor Programs Vermont provides a wonderful classroom for students interested in enhancing their outdoor leadership skills, adventure-based education and learning, and in simply getting out and enjoying the mountains, rivers, and lakes. Major aspects of Outdoor Programs at UVM include the Wilderness TREK program (for new students), the Outing Club, the climbing walls located in the gym, weekend trips, and a comprehensive outdoor leadership development program.

Billings Center, managed by Student Life, is a hub of activity each day throughout the school year. Billings houses a number of student organizations and provides a space for meetings, lectures, films, and other campus programs.

The Department of Student Life, the Student Government Association, The Cynic, WRUV-FM, Student Legal Service, VIA, and many other organizations are located in Billings Center. Also in Billings, Cook Commons and the Round Room provide easy access to campus dining service.

STUDENT GOVERNMENT ASSOCIATION (SGA)

The Student Government Association, the primary student governing organization, assumes responsibility for voicing student concerns and interests in the governance activities of the University community. It recognizes and funds approximately 100 student organizations. More information on SGA is available at http://www.uvm.edu/~uvmsga.

ATHLETICS AND RECREATIONAL SPORTS

The University sponsors 22 varsity sports at various participatory levels. All full-time undergraduate students are eligible to try out for varsity sports and are encouraged to participate in all levels of sports activities.

Varsity Athletics Athletic eligibility is determined through the Athletic Compliance Eligibility Office. All varsity athletes must comply with all appropriate rules and regulations of The University of Vermont, NCAA, and those of the playing conferences with which UVM is affiliated. Each prospective student-athlete and current student-athlete must receive an individual eligibility clearance from the Athletic Compliance/Eligibility Office which may include the need for a physical exam. He/she must also receive appropriate clearance from the UVM Student Health Center prior to participating in any intercollegiate activity including practice, preseason conditioning, and contests.

The athletic policies of the University are developed by the Director of Athletics in conjunction with the Athletic Council, an advisory board to the President composed of faculty, students, and alumni. Athletic affiliations are maintained with the NCAA, AMERICA EAST, and ECAC.

Opportunities exist in the traditional seasonal sports for all students who are eligible to compete. In the fall, the programs offered to men include soccer, cross-country running, golf, and tennis. The programs offered in the fall to women include field hockey, soccer, cross-country running, and tennis. Winter programs include basketball, ice hockey, skiing, and swimming for both men and women. The spring programs for men include baseball, lacrosse, and tennis. Women's spring programs include softball, lacrosse, tennis, and indoor and outdoor track.

Programs range in strength from the national level to the regional and New England level. All prospective students interested in obtaining information concerning a particular varsity sport should contact the coach of that sport.

Club Sports A variety of club sports, from Rugby to Equestrian and Cycling teams, offer UVM students recreational activity a well as competition with other colleges and universities.

Recreational Sports The Recreational Sports Program offers over 20 intramural sports and special events throughout the academic year. Recreational facilities are available every day to provide students the opportunity to participate in activities that interest them. For specific program information, contact the Recreational Sports Office, (802) 656-4483, or visit www.uvm.edu/~recspts/recsports.

Health Services

CENTER FOR HEALTH AND WELLBEING

The Center for Health and Wellbeing offers counseling, medical and women's clinics, nutritional counseling, physical therapy and athletic medicine, a health promotion program, a drug and alcohol education program, laboratory services, and 24-hour emergency telephone advice (802) 656-3350. Visit our website for more complete information — http://www.uvm.edu/~dosa/chw.

Counseling Over a thousand students use the services of the Counseling Center each year for improving academic success, for mental health counseling, and personal growth work. All records in the Counseling Center are confidential, the names of clients are not available without the student's permission. The staff consists of women and men of varying backgrounds, ethnicity, ages, and physical abilities. Students taking six credits or more are eligible for services.

The Counseling Center is accredited by the International Association of Counseling Services and adheres to the code of ethics of the American Psychological Association. Counseling is located in an historic brick house on the corner of Main Street and South Williams, (802) 656-3340.

Student Health/Medical and Women's Health Clinics

The Clinics are available to all students (except those in the College of Medicine) for primary and preventive health care. Most of these services are covered by the comprehensive student fee. Students entering the University are required to furnish the Center with a complete immunization record, to include two valid measles (Rubeola) vaccinations, and a medical history. A physical exam is not required.

Health Insurance The University makes available to students an optional health insurance plan that provides hospitalization and some outpatient benefits. Full-time students who do not provide proof of adequate health insurance at the time of registration will be required to purchase the University-sponsored plan.

The Burlington area has a large and sophisticated medical community of which the Center for Health and Wellbeing is a part. Students requiring consultations are referred to specialists in the area. When necessary, hospitalization is usually arranged at Fletcher Allen Health Care, a teaching hospital located on the edge of the main campus. Note: The University Health Center (UHC) is not the UVM Center for Health and Wellbeing.

Residential Life

The mission of the Department of Residential Life is to create an atmosphere within the University of Vermont residential system that facilitates the growth and development of all students. This includes providing a safe and secure environment that fosters healthy, inclusive community building among all residents – supporting and emphasizing academic success. We are committed to, and intentional about, providing students a range of experiences within their living environment. Desired outcomes of these experiences include:

- The development of a sense of belonging
- The acquisition of knowledge and skills
- The development of critical thinking skills
- The ability to make ethical choices
- The acceptance of self-responsibility

Community councils complement the department's mission, represent student opinions, and provide educational and social programs for their constituents.

Student Rooms

The campus is divided into seven complexes. Each student room is equipped for comfortable residence hall living. Double rooms have two beds, two desks and chairs, bureau space for each student, two closets, and blinds or shades on the windows. Bookshelves are provided in some rooms. Students provide their own bed linen, towels, pillows, wastebaskets, and lamps. Laundry facilities are provided in the complexes.

Residential Technology

All residence hall rooms are wired for access to the Internet and UVM's campus cable television system. For more information please visit the Residential Life website or call (802) 656-3808.

HOUSING

All students are encouraged to reside in one of a variety of housing options, ranging from theme-based suites in our Living/Learning Center to substance-free living in Redstone Hall.

Undergraduate Housing

All first time, first-year students are required to live on-campus for four matriculated semesters. Over 200 staff members in Residential Life are committed to making on-campus living experiences as productive and rewarding as possible.

Exceptions to living on-campus will be heard prior to June 1 for First-year or Second-year students:

- Residing at home with parents or legal guardians
- Who claim independent financial status in accordance with the guidelines provided by the UVM Financial Aid Office
- Married or united by civil union
- Who have dependent children.

Housing for return students is determined by a lottery held each spring. Second-year students who are members of a sorority or fraternity and want to live in their sorority or fraternity house must submit their request through their President and Chapter Advisor to Department of Student Life by mid-March.

Students living in the residence halls must have room and meal plan contracts. Contracts are binding for the full academic year unless canceled for due cause with the approval of the Department of Residential Life. In August, new students will receive notification of their housing assignments. Rooms may not be occupied until the date specified. Students are expected to leave the residence halls not later than 24 hours after their last examination or by 8:00 p.m. on the last day of final examinations.

The Department of Residential Life is located in Robinson Hall on Redstone Campus. Please call (802) 656-3434 with questions.

Upper Division and Graduate Housing

Housing at Trinity Campus – right next to the UVM campus – is a housing option for graduate, non-traditional and some transfer students and is designed to respond to the various and special needs of this student population. There are 100 single rooms; each furnished with a bed, dresser, desk and closet. The contract is for a nine-month period, with separate options for the summer. Please contact the Ethan Allen Housing Office for further information, (802) 654-1735 or email nwright@zoo.uvm.edu.

Student Family Housing

There are 115 University-owned apartments designated for student families located just outside Winooski at Fort Ethan Allen. About five miles from campus on Route 15, the apartments are close to shopping centers, hospital, and educational institutions. These apartments have several amenities.

Detailed rental information may be obtained from the Ethan Allen Housing Office, 14 Ethan Allen Avenue, Fort Ethan Allen, Colchester, Vermont 05446, (802) 654-1735.

INTER-RESIDENCE ASSOCIATION (IRA)

The Inter-Residence Association represents students living in UVM residence halls. The council, with its executive board and representation from each residence complex and ongoing committees, offers programs and services and provides leadership for residence hall students. The Association represents residential student interests to other constituencies within the University community and the greater Burlington area.

Veterans Advising and Benefits

The University provides support and advising to any veteran or dependent eligible for benefits under Federal Law, Chapters 30, 31, 32, 34, 35, or 106. Students eligible for these benefits should contact the Registrar's Office at least one month prior to registration each semester. Students wishing to register for benefits should be prepared to present their certificates of eligibility.

It is important that all veterans and dependents keep in contact with the University for the latest information regarding benefits and requirements. Also, those students involved in the Veterans Program should contact the University in the event of any change in credit load, dependency status, address, or major. The phone number is (802) 656-2045.

Academic and General Information

This section offers a summary of regulations and procedures. In addition to the information presented here, the rights and responsibilities of students and University policy on these and other matters are explained in full in the *The Cat's Tale*, available online at www.uvm.edu/~dosa/handbook/. Students are responsible for meeting all requirements for their respective degrees as stated in the catalogue and for complying with the following regulations and procedures.

ACADEMIC ADVISING

Academic Advising is a process in which students seek and receive guidance with academic program planning, usually from a faculty advisor. Meaningful educational planning is compatible with a student's life goals, therefore academic advising encompasses discussion of life goals and assistance with the developmental process of life goals clarification. The ultimate responsibility for making decisions about educational plans and life goals rests with the individual student. Assistance with the clarification of life goals is not limited to the academic advising relationship, and may include staff in areas such as career development, residential life, and counseling. For academic advisors, assisting students in the clarification of life goals means helping students explore and define their educational and career goals in an atmosphere of mutual respect and learning. Advising, while non-prescriptive, encourages students to think critically, seek out resources, and develop action steps. The desired result is that students will feel a sense of connection with the advisor and a sense of guidance, while realizing personal responsibility for exploring options and making decisions.

Academic Advisors remain alert to any barriers to student academic performance and guide students to address these appropriately. The advisor needs to be able to refer student to appropriate academic and support services to enhance both their student experience and their academic success. Faculty advisors are expected to initiate contact with each advisee during a student's first two semesters on campus and when a new advisee is assigned to the advisor (includes newly declared majors and transfer students). After the first two semesters, maintaining regular contact with the advisor is the responsibility of the advisee. The advisor will be prepared to meet with and listen to his/her advisees on a regular basis. Advisor and advisee share responsibility equally for the success of the advising relationship.

Advising Resources

In addition to an assigned faculty advisor, a variety of other advising resources are available to undergraduates:

The Learning Cooperative represents a collaborative effort on the part of academic and student affairs offices to improve the ability of students to benefit fully from their academic experiences. The Learning Coop supplements the academic environment by providing developmental instruction in writing, reading, and study skills, works with students to develop good learning strategies for challenging courses, and maintains a campus-wide tutoring program.

Prehealth Advising assists undergraduate students with the admissions requirements for dental and medical school. A library of resource materials is maintained which includes literature on alternative health careers, school catalogues, and premedical education journals.

Prelaw Advising is provided by the UVM Prelaw Committee and assists students by sponsoring meetings and panel discussions regarding career options in law. Advising also provides specific information on applying to law schools. A current collection of law school catalogues is maintained for interested students.

Preveterinary Advising is available to discuss plans for graduate school and employment in animal science career areas. A selection of catalogues, pamphlets, and other related literature is maintained.

International Student Advising is provided through the Office of International Education to assist international students with personal and academic problems, as well as matters relating to immigration and social and cultural adjustment. A special pre-orientation program, prior to the beginning of the fall semester, provides new international students with an introduction to the University and the Burlington community. An active campus International Club provides an opportunity for international students to contribute to campus life and to make friends outside the classroom. Other clubs with an international focus, such as the Overseas Development Network, are also available. Students planning to study abroad should also consult the Office of International Education which is located at B161, Living/ Learning Center.

Multicultural Student Advising at the ALANA Student Center provides broad based support aimed at ensuring the success of Multicultural students at UVM. Services include: academic advising; linking students to resources and opportunities on campus; tutoring; peer mentoring; social and cultural networking. Students may elect to take part in The Summer Enrichment Scholarship Program. A pre-first year opportunity that offers an academic experience (6 credits) and provides an introduction to campus and college life before the official start of the school year.

Career Services assists students who are exploring a variety of potential career options early while in their academic majors. A library of career information and school catalogues is maintained.

Continuing Education Advising assists nondegree students, nontraditional students, and evening degree applicants on course selection, how to apply for a degree program, general information about UVM academic resources, and career and life planning. The advisors work with individuals who are returning to school after raising a family or working outside the home, who are considering a career change, or who have recently graduated from high school. A series of free workshops on topics of interest to adult learners are also offered. Teaming up with the Learning Co-op, UVM Continuing Education helps students "learn how to learn" with free tutoring integrated into several evening introductory-level courses each semester.

TYPES OF ENROLLMENT

Degree Students

Students who have presented appropriate credentials for

admission and have been accepted as students in a degree program. The following four actions apply only to degree students.

Intercollege Transfers Degree students may transfer to another college/school within the University. To do so, a student must complete a Change of Major form and obtain the approval of the deans of the two units involved. Students wishing to transfer must have a cumulative GPA of 2.0. A cumulative GPA of 2.5 is required for transfer admission into teacher licensure programs in the College of Education and Social Services. Transfers will be approved only if space is available and may be conditional upon students satisfactorily completing requirements set out by the new college/school.

In the case of veterans receiving educational benefits through the Veterans Administration, the change must be brought to the attention of the Registrar's Office, 360 Waterman Building, where a Change of Program or Place of Training Form #22-1955 must be completed and submitted for approval to the Veterans Administration.

Readmission to the University Degree students who have left the University for one semester or more must write to their dean to request readmission. Students must apply for readmission by October 31 or March 31 preceding the appropriate semester of return.

Withdrawal from the University Degree students who wish to withdraw from the University must first notify their academic dean in person or writing.

Leave of Absence A leave of absence means that a student in good standing, who is eligible for continued enrollment, ceases to be enrolled and is guaranteed readmission.

1. Students submit a written application for a leave of absence to their college/school prior to the beginning of the semester that the leave will take effect. To be confirmed, leave forms must be signed by both the student and their dean.
2. Leaves are granted for a finite period of time, and normally may not exceed four semesters. A leave normally may not be granted to students on academic trial or disciplinary probation.
3. While on leave, the students status is temporarily inactivated. A leave of absence guarantees an individuals readmission only if the student confirms intent to return by the closing date for a normal readmission application (October 31 and March 31 preceding the appropriate semester). A leave does not guarantee housing upon the students return
4. Unused financial aid will not be carried over. Upon readmission, students must reapply for financial aid according to Office of Financial Aid policies and procedures in effect at that time.

Class Standing

The designation of a student's class shall be determined by the number of academic credits completed. The designations are as follows:

Bachelor's degree:

First-year	0-26.9 Credit Hours
Sophomore	27.0-56.9 "
Junior	57.0-86.9 "
Senior	87.0 and over "

Associate degree:

First-year.	0-26.9 Credit Hours
Senior	27.0 and over

Nondegree Students

This category applies to students who have presented minimum credentials and have been permitted to undertake limited course work up to six credit hours, or two courses, per semester for a purpose other than the earning of a degree. Approval from the Dean of Continuing Education is necessary for a student to exceed the six-credit maximum. Credits earned by nondegree students who later apply and gain admission to a degree program will be evaluated and, if appropriate, will be accepted toward completion of their degree.

Nondegree students may enroll for a maximum of six credits or two courses per semester in the day program.

Selection of courses for those having long-range plans of earning a degree in the daytime program should be made on the basis of information given in this catalogue. Students interested in making a formal application for admission to the University should contact the Admissions Office.

Students presently enrolled and in good standing at another institution may take courses at UVM to transfer to their institutions. These visiting students are considered nondegree students and should contact Continuing Education for information and registration material.

Before completing 30 credits of course work through the evening program or summer session, degree-bound students should consult with an advisor at Continuing Education, submit an application for formal admission to UVM, and then should consult with the appropriate dean's office to structure further courses into a degree program.

All nondegree students who would like assistance in planning educational programs and selecting courses should contact Continuing Education, (802) 656-2085.

REGISTRATION

Degree students must register for the next semester at the designated time, unless excused in advance by their dean. Registration instructions are on the web at http://registrar.uvm.edu. Written approval of the student's dean is required to register for more than 18 credit hours.

Students with disabilities, who are in receipt of appropriate medical certification from the Director of the Student Health Center, will be approved to enroll for a course load of less than 12 credit hours (FTE). Such students will be afforded full-time status in accordance with Section 504 of the Rehabilitation Act of 1973.

Any credits earned at the University of Vermont are transferable to another institution at the discretion of the receiving school.

Course Add/Drop

Courses may be added or dropped only during the first ten instruction days of the semester. After the first five instruction days the instructor may not allow the course to be added if material may not be made up (e.g. laboratories) and if the absence of this work would seriously affect the quality of the students educational experience.

Drops will only be allowed after the tenth day of instruction if a student was enrolled by administrative error and did not attend the class. The disposition of such cases is handled by the Registrar's Office.

Course Withdrawal

From the eleventh day of instruction to the end of the ninth week of classes, students may withdraw from courses. To do so, students must complete a Course Withdrawal Form, consult with their advisor, and obtain the instructor's signature. The student must deliver the form to the Registrar's Office no later than 4 p.m. on Friday of the ninth week of classes. Students give a copy to their dean for information purposes. A grade of W will be assigned by the instructor(s) and recorded on the student's permanent record.

Between the end of the ninth week and the last day of classes, students may withdraw from one or more courses only by demonstrating to their college/school studies committee, through a written petition, that they are unable to continue in the courses(s) due to circumstances beyond their control. Such petition must contain conclusive evidence, properly documented, of the illness or other situation preventing completion of the course(s). Acceptable reasons do not include dissatisfaction with performance or expected grade, with the course or instructor, or desire to change major or program. If the petition is approved, a grade of W will be assigned by the instructor(s) and recorded on the student's permanent record. If the petition is denied, the instructor(s) will assign a final grade (A-F) in accordance with the same criteria applied to all other students in the course(s).

Withdrawn courses are included in the number of credits used for billing purposes. No withdrawals will be permitted after the last day of classes. In all instances, withdrawal grades remain on the permanent academic record, but will not affect the grade-point average.

Retroactive Academic Adjustment

The University will consider requests for late withdrawal and retroactive academic adjustments when those requests are accompanied by appropriate information. To receive consideration, a student or his/her authorized representative must submit to his/her dean's office a completed Consultation Form for Medical Withdrawal and Incompletes. Forms are available in deans' offices.

Students may appeal the academic adjustment decision of their school or college to the Provost's Office. If the appeal is based upon a certified disability and recommended as an appropriate accommodation, students may appeal the academic adjustment decision of their school or college as outlined in Policies and Procedures for Students with Disabilities under the section entitled "Protocol for Dispute Resolution." All appeals must be submitted in writing.

Decisions regarding adjustments to academic records are distinct and separate from refunds. Any refund, including tuition, financial aid awards, fees, room, and board, will follow federal and institutional guidelines. The effective date for any refund will be the date that the completed form was received by the academic dean's office. Questions regarding refunds should be directed to the Controller's Office.

Independent Study Courses

Independent study is a course taken for credit, which is tailored to fit the interests of a specific student, and which occurs outside the traditional "classroom/laboratory setting."

Independent study is carried out under the direct supervision of a faculty member having expertise in a particular area of investigation. Consequently the project will be done in the department primarily responsible for the field of study. Prior to enrollment in independent study, students must obtain the approval of their advisor, faculty sponsor, and the faculty sponsor's department chairperson.

Independent study may be taken for variable credit. The amount of credit to be granted should be mutually agreed upon by the student and the faculty sponsor prior to registration. When a project is to cover more than one term, the designation XC (extended course), rather than incomplete, should be used on the final grade sheet for the first term of work.

Academic units offering independent study will be responsible for administering such work. Specific guidelines, which define the responsibilities of both faculty and student for administering the independent study, are noted below. Alternative guidelines that incorporate these basic points are acceptable.

Guidelines:

a. The success of an independent study project is often related to the amount of advance planning expended on the project. Consequently, planning for the project should, whenever possible, be initiated in the semester before the course is taken.

b. By the end of the add/drop period, students will be required to submit to their faculty sponsor a specific plan which must include, but not be limited to, the following:

i. The project title.

ii. A statement of justification, indicating why independent study is being selected and the reason for undertaking the project, its importance, and how it relates to other work done by the student.

iii. A clear and complete statement of project objectives.

iv. A concise statement of the plans and methods to be used in order to accomplish each objective.

c. During the first full week of classes the student and the faculty sponsor will meet and prepare a document which includes the following:

i. A schedule of dates when the student and faculty member will meet and discuss progress, including a time plan indicating when various parts of the work are projected for completion.

ii. A list of those ways in which documentation of work can be shown.

iii. A plan for evaluation, which will include the specific work to be submitted for evaluation on the project, and a statement of criteria to be used for evaluation, will also be included.

d. It is the responsibility of the faculty supervisor to ensure that all the provisions outlined above have been satisfactorily accomplished. Copies of all documents and schedules mentioned must be filed with the department chairperson by the end of the add/drop period. Faculty sponsors should retain the completed projects, along with faculty evaluations, for review, if necessary, by appropriate school/college committees.

Undergraduate Enrollment for Graduate Credit

Senior undergraduates may enroll for up to six graduate credit hours at UVM under the following circumstances: courses must be available for graduate credit; total enrollment including the graduate course must not

exceed twelve credit hours in the semester in which the course is taken and the course must not be computed as part of the bachelor's degree. Permission to seek graduate credit must be obtained from the Graduate Dean in writing by the dean of the undergraduate college/school. Graduate credit can be used only at UVM if the course is judged appropriate by the student's advisor for the particular graduate program.

Accelerated Master's Degree Programs

A number of departments and programs provide opportunities for selected undergraduates to participate in Accelerated Master's Programs (AMPs). This option is available for admission to graduate programs in Animal and Food Sciences, Biology, Biomedical Technology, Biostatistics, Computer Science, Education (Curriculum and Instruction and Professional Education), History, Materials Science, Mathematics, Mechanical Engineering, Microbiology and Molecular Genetics, Nursing, Public Administration, and Statistics. The AMP allows early admission to graduate studies with up to six concurrent credits double-counted toward the bachelor's and master's degrees.

EXAMS AND GRADING

Examinations

Hour Tests:

1. One or more hour tests are usually given during a semester in each course. These are scheduled by the faculty member within the class periods assigned for the class.
2. In a course which has several sections meeting at different hours, a common test for all sections may be given only by arrangement with the Registrar. A schedule of such tests is made up at the beginning of the semester.
3. Attendance at hour tests scheduled outside the normal meeting time of the class shall not have precedence over attendance at other scheduled activities or other important commitments of the students concerned. Faculty members must be prepared to give a make-up test for those unable to be present at the time set.
4. University academic responsibilities have priority over other campus events. Attendance at (1) regularly scheduled classes have priority over specially scheduled common hour examinations, (2) common hour examinations have priority over attendance at other activities.

Final Exams:

1. The examination period at the end of each semester is set by the official University calendar.
2. Final examinations shall be given only during the regular examination period except by permission of the dean of the college/school on request of the chairperson of the department. No examination (regular or final) shall be given during the last week (the last five instructional days) of the semester except lab exams given in courses with specific lab sections.
3. The time and place of each final examination are determined by the Registrar and a schedule is circulated and posted. Any change in the scheduled time or place may be requested by the chairperson of the department concerned when conditions seem to warrant such special arrangement. Decision on such requests rests with the Registrar.
4. In every course in which a final examination is given, every student shall take the examination unless excused by the instructor.
5. Students having a conflict in their final examination schedule must notify the faculty concerned of such conflict not later than the close of business one week prior to the last day of classes for the semester in which the conflict arises.
6. Students who are absent from a final examination for any reason must report that fact and the reason, in person or in writing, to their instructor within 24 hours. If the absence is due to any situation beyond the reasonable control of the student (e.g. illness or family tragedy), the instructor must provide the student with the opportunity to complete the course requirements. At the instructor's discretion, this may be an examination or some other suitable project. The instructor may require evidence in support of the student's reason for absence.
7. If the absence is not reported as provided above, or is not excused by the instructor, the examination is regarded as failed.
8. No student shall be required to take three or more final examinations in one 24-hour period.
9. Unless a mutually agreeable alternative time can be reached by the student and the instructor, the scheduled make-up will occur the next day after the regularly scheduled examination. These considerations are subject to the following constraints: all exams will be given in the final exam period and all conflicts must be resolved before the start of the final exam period.
10. Students will select which of the three examinations they wish to take at an alternative time. In cases where the instructors in all three sections feel it is impossible to give the examination at an alternative time, and all conflicts are in the same academic unit, the appropriate dean's office, in consultation with the faculty involved, will establish which of the three examinations will be taken as a make-up. If the unresolved conflict involves more than one college, the deans of the units in question will resolve the matter. If the deans involved cannot reach agreement, then a person from the Provost's Office will establish which of the three examinations will be taken as a make-up.
11. All final examination materials should be retained for at least one month after the final examination session in case any questions arise concerning grades and to afford students the opportunity to review their graded final examination papers if they wish to do so.

Grades

Grades are reported and recorded as letter grades. Student grade-point averages (GPA) are calculated from quality point equivalents noted here:

	Points per Credit Hour
A+ Excellent	4.00
A Excellent	4.00
A- Excellent	3.67
B+ Good	3.33
B Good	3.00
B- Good	2.67
C+ Fair	2.33
C Fair.	2.00
C_ Fair	1.67
D+ Poor	1.33
D Poor	1.00
D- Poor	0.67
F Failure	0.00

In certain instances, grades are assigned that will appear on the transcript, but will not be used in grade-point calculation. These grades are:

XC	Extended Course. (see below)
AU	Audit. (see below)
INC	Incomplete. (see below)
P/NP	Passed/Not Passed. (see below)
S/U	Satisfactory/Unsatisfactory. (see below)
M	Missing. Grade not turned in by the instructor.
W	Withdrawn.

The XC grade is assigned when the nature of the coursework makes it unreasonable or impossible for the student to complete the required work within the regular semester.

AU: Students wishing to regularly attend a course, but not receive credit, may register as an auditor, with the approval of the dean and the instructor. Auditors have no claim on the time or service of the instructor. Students must meet minimum levels of performance set by the instructor at the time of registration in order to receive an audit grade. Tuition is charged at the applicable rate. Under no circumstances will changes be made after the add/drop period to allow credit for courses audited.

INC grades may be assigned when coursework is not completed for reasons beyond the student's control. Incompletes require the approval of the student's college/school dean. The incomplete course requirement will be satisfied at the earliest possible date, but not longer than the beginning of the corresponding semester of the next academic year. In cases of laboratory assignments, the student must complete all work the first time that the laboratory experience is offered again. Instructors will fill out an incomplete card and forward it to the student's dean and include the reason for the incomplete as well as the completion date agreed to by the student and instructor. It is the student's responsibility to learn from the dean's office whether the request has been approved, the date of completion, and, from the instructor, the nature of all outstanding requirements.

Incompletes may be approved for the following reasons: Medical, personal tragedy or academic. In all instances, students must contact the appropriate deans office to obtain necessary applications information.

P/NP: Degree program students, not on academic trial, are permitted to take up to six courses (three courses for two-year students; or as many courses as they have semesters remaining for future transfer students) on a pass/no pass basis, beginning in their sophomore year (second semester of the first year for two-year students). Courses in the student's major department, either for the major or for the degree, and electives within the distribution requirements of a department may not be taken on a pass/no pass basis. This option may be used without condition for free electives. It also may be used for physical education (activity) courses, whether taken to fulfill a requirement or as electives, and shall not be counted as a part of the six standard courses described above.

Students must complete all work normally required in these courses to receive full credit toward graduation for passing them. The instructor will not be informed of the students status and the Registrar will record grades of D or higher as PASS and grades of F as NO PASS. The grade submitted by the instructor will not become available to the student nor to any third party.

To apply, a PASS/NO PASS Request Form, obtained from the Registrar's Office, must be approved by the student's academic advisor and submitted to the Registrar's Office during the first two weeks of the semester. Requests to be removed from that status must be filed during the same period. Any question about a course or courses being appropriately elected as pass/no pass for a student will be resolved by the student's college/school dean.

Note: Nondegree students may not take courses on pass/no pass basis.

S/U is used in courses where the A-F grade is inappropriate, such as in seminars, internships, practica, etc. The student will receive the appropriate credit hours toward graduation for the S grade, but not for the U grade. Courses using this grading system are so indicated in the catalogue description. The S/U is available only on a whole course basis and is available for courses that count towards degree requirements.

Grade Appeals

Students who feel that they have received an unfair grade should first contact the Registrar's Office to verify that the grade submitted by the instructor is the same as that printed on the grade report. If the grade has been reported correctly, a student should next contact the instructor, department chair, and dean of the college/school in which the course is offered (in that order) to discuss the matter. A decision to change a grade can be made only by the instructor.

Grade changes must be made by the instructor and approved by the student's dean by the end of the first month of the following semester unless an extension is granted by the student's dean.

Dean's List

Dean's List status is awarded to full-time undergraduate students with a cumulative grade-point average of not less than 3.0 who stood in the top 20 percent of each class of their college/school during the preceding semester. The deans' lists are published at the beginning of each semester. Full-time enrollment in this case shall be a minimum of 12 credit hours in courses in which grades of A, B, C, D, or F can be given.

In addition, each semester a Continuing Education Honors List recognizes the top 20 percent of nondegree students who have had a long association with UVM and achieved a high cumulative grade-point average.

Repeated Courses

Students who repeat a course only receive credit once for the course. The grades for all occurrences of the course remain on the permanent academic record and all are included in computing the cumulative grade-point average.

Academic Reprieve Policy

The Academic Reprieve Policy is designed to make it possible for former UVM students, whose academic performance when first enrolled was below standard, to resume their studies without the encumbrance of the grades previously earned.

The Academic Reprieve Policy is available to returning students who have not been enrolled at UVM or any other accredited institution of higher education for a period of at least three calendar years.

Former students returning to the University may request the application of the Academic Reprieve Policy only once in their career at UVM. The established procedures and criteria for admission or readmission apply to students applying for an Academic Reprieve.

The dean of the college/school in which the student is enrolled at the time of initial eligibility for the application of the Academic Reprieve Policy shall determine eligibility for, and application of, the policy. Eligible former students must file a petition with the appropriate dean requesting reprieve of all prior course work at the University, either at time of admission or readmission or before the close of the first semester of re-enrollment. The Reprieve Policy includes all previous UVM work and does not allow the students to pick and choose individual courses for reprieve. All courses with grades below passing are ignored, credit hours for courses passed are carried forward, but the grades are not figured in the new grade-point average, which begins again at zero.

Any person electing the reprieve option is required to complete a minimum of 30 additional regularly graded credits at UVM before a degree may be awarded (15 regularly graded credits for the associate degree); these credits are not open to the pass/fail option. Those electing the reprieve option may qualify for honors at graduation only on the same basis as any transfer student, i.e. completion of 60 or more regularly graded credits at UVM (30 or more regularly graded credits for the associate degree programs).

Persons electing the reprieve option will be required to meet degree requirements of the catalogue in effect on the date of the student's application for readmission.

The Reprieve Policy applies solely to regular undergraduate degree programs. Graduate programs are specifically excluded.

Low Scholarship

Following are the general University regulations relating to low scholarship. The Studies Committee of each college/school may determine more stringent requirements. Students with questions regarding their academic standing should consult their college/school dean.

"On Trial": This is an intermediate status between good standing and dismissal in which students remain enrolled according to stated academic conditions of their college/school.

Students are placed "on trial" by their dean or designated committee of their college/school. Special academic conditions may be set in each case. Normally the period of "trial" status is one semester.

This policy applies in the following instances:

(1) Students, having been dismissed for low scholarship, are placed "on trial" upon readmission.

(2) Students may placed "on trial" if in any semester they have failed one-half or more of their semester hours, but have been permitted to continue in college/school.

(3) Students whose records have been consistently below the graduating average or generally unsatisfactory in any semester may be placed "on trial" or continued "on trial" even though they do not come within the provisions that apply to "Separation."

Separation: Students are dismissed from UVM if they receive grades below passing in one-half or more of their semester hours in any semester, unless they are allowed to continue by action of the designated committee.

Students who fail to meet the condition of their trial or whose record has been unsatisfactory and consistently below the graduation average may be dismissed for low scholarship even though they do not come within the "On Trial" provisions.

Students dismissed for low scholarship must address their application for readmission to their college/school and receive written approval from their dean before enrolling in any University course.

Student dismissed for disciplinary reasons must receive written approval from the Vice President for Student Affairs before enrolling in any University course.

Transcripts

An official transcript is the reproduction of a complete, unabridged permanent academic record validated with the University seal, facsimile signature of the Registrar, and date of issue. A rank-in-class entry is made upon completion of undergraduate degree requirements.

Students and alums may obtain an official transcript of their permanent academic record by writing the Office of the Registrar, 360 Waterman Building. Please allow a minimum of one week for normal processing and three weeks following the end of a semester. Transcripts are not released when there is indebtedness to the University.

WAYS TO EARN CREDIT

Transfer of Credit

Students seeking to transfer academic credit may do so only for courses that are taken at accredited institutions and are comparable in content, nature, and intensity to courses taught at The University of Vermont. Credit is not given for grades lower than C. To insure transferability of courses to be taken elsewhere, degree students must secure prior approval for each course in writing from Transfer Affairs. Questions regarding credit transfer should be directed to the Office of Transfer Affairs, 360 Waterman.

Credit by Examination

A degree student may, under the following conditions, receive credit for a course by taking a special examination and paying the special examination fee charge of $50 per credit hour. The examination fee must be paid prior to taking the examination.

A request for such an examination must be made in writing at least one month before the date of the examination, and it must be approved by the student's advisor, the chairperson of the department in which the course is given, and the dean, in that order. The student must neither have audited, previously received a grade or mark, nor have attempted a prior special examination in this course at UVM or at any other institution of higher education. Only specific University courses may be challenged using special examination. Readings and Research, Honors Research, etc., are specifically excluded. Special Topics may be challenged only if that course is offered during the semester in which the special examination is being requested. The student may not take a special examination in a course whose content is presupposed by other courses the student is currently enrolled in or has already taken. In cases of uncertainty, the department chairperson shall decide whether it is appropriate for the student to take a special examination for credit in a particular course. Upon passing the special examination, as determined by the examiner and the chairperson of the department in which the course is given, the student receives credit, but not a grade, for the course. Credit by examination forms are available in the Office of the Registrar, 360 Waterman Building.

College-Level Examination Program (CLEP)

The University considers credit for most of the 30 specific

subject CLEP exams providing the student has not previously attempted a similar course of study at a college level. Scores acceptable for credit are comparable to attaining a level of accomplishment equal to a B in a graded course situation. Individual exams may earn a student three, six, or eight semester hours of credit depending on the nature and scope of the material covered. Credit is not granted for the general exams.

Credit granted for CLEP Examinations may be applied toward distribution requirements and to the total semester hours specified for a particular degree program when approved by the dean of the college/school in which the student is subsequently a candidate for a degree. Information about CLEP and application forms are available at the Office of Transfer Affairs, 360 Waterman Building.

Credit for Calculus

Credit will be given for Math. 21, or Math. 22 and Math. 121, according to the following guidelines.

May receive credit for Math. 21 provided the student:
1. Has not taken the advanced placement test in mathematics; and
2. Has not attempted Math. 21 for credit at UVM; and
3. The average of the grades received in Math. 22 and Math. 121 is B or better; and
4. Received a B or better in Math. 121.

May receive credit for Math. 22 provided the student:
1. Has not taken the advanced placement test in mathematics; and
2. Has not attempted Math. 22 for credit at UVM; and
3. Received a B or better in Math. 121.

Academic Learning Integrated with Volunteer Experience (ALIVE)

Through this program, the University of Vermont offers college credit to members of AmeriCorps*VISTA (Volunteers in Service to America). VISTA members participating in ALIVE can earn up to nine undergraduate or graduate credits in a variety of disciplines for structured reflection of their service experience. VISTA scholars will attend workshops, create portfolios and work with faculty advisors during residency weekends on campus that will not detract from their time serving in communities. UVM will annually award six scholarships to Vermont VISTA scholars who participate in ALIVE.

Credit for Military Service

University of Vermont degree students may have their military service record reviewed for possible transfer credit. Veterans should present form DD 214 to the Office of Transfer Affairs; active duty personnel should have form DD 295 sent directly from the educational officer on the base. Army personnel seeking credit other than Physical Education should have an AARTS transcript sent directly from: AARTS transcript, Manager, AARTS Operations Center, 415 McPherson Ave., Ft. Leavenworth, KS 66027-1373. Transcripts of examinations sponsored by the Defense Activity for Non-Traditional Educational Support (DANTES) are available at a nominal charge from: DANTES Contractor Representative, Educational Testing Service, P.O. Box 2819, Princeton, NJ 08540. All documents except form DD 214 should be sent directly to the Office of Transfer Affairs, University of Vermont, 360 Waterman Building, Burlington, VT 05405.

Students should contact the Office of Transfer Affairs for more information.

DEGREE REQUIREMENTS

Degrees are conferred on the recommendation of the colleges/schools. Specific degree requirements may be found in the catalogue sections devoted to the respective colleges/schools.

To be eligible for graduation, a student must have attained a cumulative grade-point average sufficient to meet the minimum requirements for the college/school in which the student is officially enrolled. Beginning with the class of 1984, the minimum grade-point average for graduation is 2.00. Grades in courses accepted for transfer credit are excluded in computing this average.

Every degree candidate must have taken 30 of the last 45 credit hours (15 of the last 30 for two-year students) in residence at the University before being awarded their degree. An exception to this rule exists for those students who have completed three years of premedical study in the University and are awarded their degrees after successful completion of one year of study in any approved college of medicine. Other exceptions to this rule may be made only upon decision of the dean or the appropriate faculty committee of the student's college/school. To qualify for a second bachelor's degree, the candidate must have fulfilled all the requirements for the degree and must have taken a full year of course work, usually 30 hours, in addition to that taken to qualify for the first degree.

Two physical education credits, normally completed during the first or sophomore year, are required of all undergraduate students in four-year programs. These credits will be included in the total number of hours required for graduation. Students may opt to take physical education on a pass/no pass basis. Medical examinations are required of all new students. Those with serious conditions may be given restricted work or may be excused by the Director of the Student Health Center.

Students pursuing two-year degree programs shall be required to complete one credit of physical education course work.

Students 25 years of age or older at time of admission or readmission are exempt from physical education requirements.

University Honors

The bachelor's and associate's degrees may be conferred with honors, by vote of the Faculty Senate, in recognition of general high standing in scholarship. Three grades are distinguished and indicated by inscribing on the diploma the words cum laude, magna cum laude, or summa cum laude.

Honors are determined in the following manner: Within the graduating class of each college/school, students in the top one percent will receive summa cum laude; the following three percent will receive magna cum laude; the next six percent will receive cum laude. The total number of honors awarded will not exceed ten percent of the graduating class of each college/school.

Honors will be calculated on all grades received at UVM. To be considered, a student must have taken at least 60 hours (30 hours for two-year programs) at UVM in which a letter grade of A, B, C, D, or F has been awarded.

STUDENT RESPONSIBILITY

Classroom Code of Conduct

Faculty and students will at all times conduct themselves in a manner that serves to maintain, promote, and

enhance the high quality academic environment befitting the University of Vermont. To this end, it is expected that all members of the learning community will adhere to the following guidelines:

1. Faculty and students will attend all regularly scheduled classes, except for those occasions warranting an excused absence under the University Attendance Policy (e.g., religious, athletic, and medical).
2. Students and faculty will arrive prepared for class and on time, and they will remain in class until the class is dismissed.
3. Faculty and students will treat all members of the learning community with respect. Toward this end, they will promote academic discourse and the free exchange of ideas by listening with civil attention to comments made by all individuals.
4. Students and faculty will maintain an appropriate academic climate by refraining from all actions that disrupt the learning environment (e.g., making noise, ostentatiously not paying attention, and leaving and reentering the classroom inappropriately).

Attendance Policy

Students are expected to attend all regularly scheduled classes. The instructor has the final authority to excuse absences. It is the responsibility of the instructor to inform students of his or her policy for handling absences and tardiness, and the penalties that may be imposed. Notification should be done both verbally and in writing at the beginning of each semester.

It is the responsibility of the student to inform the instructor regarding the reason for absence or tardiness from class, and to discuss these with the instructor in advance whenever possible. The instructor has the right to require documentation* in support of the student's request for an excuse from class. If an out-of-class exam is scheduled which conflicts with a regularly scheduled class, the regularly scheduled class has priority

The instructor has the right to disenroll any student who fails to attend a scheduled course by the third instructional day of a semester or the second scheduled class session of a course, whichever comes later, unless the student has notified the instructor and has been excused. To disenroll students the instructor must notify the Registrar, who will remove the student's name from the class list and the course from the student's schedule. The student is responsible to determine whether or not she or he is enrolled in a class.

*When a student is unable to attend class for a health reason, the student may give permission for the instructor to discuss the situation with a representative from the Center for Health and Wellbeing. As with all absences, the faculty member has final authority to excuse students from classes.

Athletic-Academic Conflicts Students participating in inter-collegiate athletics should plan their schedules with special care, recognizing the primary importance of all of their University academic responsibilities. Each semester, members of UVM varsity and junior varsity teams are responsible for documenting in writing any conflicts between their planned athletic schedule and the class schedule to their instructors by the end of the second full week of classes. Students and instructors should then discuss potential conflicts between course requirements and intercollegiate competitions. When an unavoidable conflict exists, the student and instructor should seek a resolution which permits the student to address the course requirement and participate in the athletic competition. The instructor has final authority on this matter.

Religious Holidays Students have the right to practice the religion of their choice. Each semester students should submit in writing to their instructors by the end of the second full week of classes their documented religious holiday schedule for the semester. Faculty must permit students who miss work for the purpose of religious observance to make up this work.

Freedom of Expression and Dissent

The University of Vermont is a place to learn and to teach. It is not a cloister - it does not live in a vacuum. It is both in the world and of the world. Its mission is to educate people for leadership in society. (Board of Trustees, May 1969)

Fundamental to our entire philosophy is our firm belief that rights guaranteed by the First and Fourteenth Amendments to the Constitution of the United States must be protected on the campus as elsewhere and that local, state, and federal laws must prevail on campus. Becoming a member of the University community in no way abrogates or compromises the rights, which the Constitution of the United States guarantees to all persons.

Within the University setting as within society at large, the exercise of one's rights must be tempered by recognition of the rights of others. For example, the exercise of free speech may unreasonably infringe upon the right to learn. The laws of society and the mission of the University establish the framework within which disagreement, dissent, demonstration, and advocacy may, indeed must, occur. For humankind to progress, the educational process must be dynamic even if fraught with controversy, for change cannot take place until the first question is raised. The discovery of new propositions or new solutions also may be followed by passionate advocacy. Such advocacy must never replace the continued pursuit of the University's essential purpose of learning and teaching.

It is within this context that the University rejects the use of, or the threat of force as a means of resolving differences. Violence is both unnecessary and inappropriate for those who have access to reasoned discourse and is unacceptable within an institution dedicated to reason. The University officer responsible for implementing the Policy Statement on Freedom of Expression and Dissent, when students are involved, is the Vice President for Student Affairs. In all cases, the designated officer shall attempt to resolve the situation through efforts of persuasion. The University must, if efforts at persuasion have failed, resort to the use of any legal remedy deemed necessary. Those engaged in unlawful disruption, consequently, may expect appropriate responses from either University or other law enforcement authorities or both.

A full statement of the policy is in *The Cat's Tale*, available online at www.uvm.edu/~dosa/handbook. Each student is responsible for knowing and observing this policy.

Academic Discipline

The University expects each student to maintain high standards of personal conduct and social responsibility at all times both on and off campus. As responsible citizens, all students are required to observe and to share in the support of University regulations. Any student who fails to uphold these standards is subject to disciplinary action.

The disciplinary authority of the University is vested in the President. In such cases as the President considers proper, this authority may be delegated to the several deans and to appropriate judicial bodies. The continuance of each student, the receipt of academic credits, graduation, and the conferring of any degree or

the granting of any certificate are strictly subject to the disciplinary powers of the University. The University is free to cancel a student's registration at any time on any grounds if it considers such action to be for the welfare of the institution.

Policy on the above matters is explained in detail in *The Cat's Tale*, available online at www.uvm.edu/~dosa/handbook. Each student is held responsible for knowledge and observance of these rules and regulations, including those concerned with academic honesty.

Academic Honesty

The principal objective of the policy on academic honesty is to promote an intellectual climate and support the academic integrity of the University of Vermont. Academic dishonesty or an offense against academic honesty includes acts that may subvert or compromise the integrity of the educational process. Such acts are serious offenses that insult the integrity of the entire academic community.

Offenses against academic honesty are any acts that would have the effect of unfairly promoting or enhancing one's academic standing within the entire community of learners which includes, but is not limited to, the faculty and students of the University of Vermont. Academic dishonesty includes knowingly permitting or assisting any person in the committing an act of academic dishonesty.

The policy distinguishes between minor and major offenses. Offenses purely technical in nature or in which the instructor does not perceive intent to achieve advantage are deemed minor and are handled by the instructor. Major offenses are those in which intent to achieve academic advantages is perceived.

A full statement of the policy can be found in *The Cat's Tale*, online at www.uvm.edu/~dosa/handbook. Each student is responsible for knowing and observing this policy.

UNIVERSITY RESPONSIBILITY

Many courses involve instruction in and the use of various types of power equipment, laboratory apparatus, and specialized facilities. The University takes every precaution to provide competent instruction and supervision of such courses. It is expected that students will cooperate by following instructions and exercising precaution. In case an accident resulting in personal injury does occur, the University can assume no responsibility.

Notification of Rights Under FERPA for Post-Secondary Institutions

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. These rights include:

1. The right to inspect and review the student's education records within 45 days of the day the University receives a request for access. Students should submit to the registrar, dean, head of the academic department, or other appropriate official, written requests that identify the record(s) they wish to inspect. The University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the University official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.
2. The right to request the amendment of the student's education records that the student believes are inaccurate or misleading. Students may ask the University to amend a record that they believe is inaccurate or misleading. They should write the University official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading. If the University decides not to amend the record as requested by the student, the University will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.
3. The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent. One exception which permits disclosure without consent is disclosure to school officials with legitimate educational interests. A school official is a person employed by the University in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the University has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility.
4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the University of Vermont to comply with the requirements of FERPA. The name and address of the office that administers FERPA:

   Family Policy Compliance Office
   U.S. Department of Education
   600 Independence Avenue, SW
   Washington, DC 20202-4605

Name and Address Exclusion

The Family Educational Rights and Privacy Act of 1974 grants to all students the right not to have personal information contained in the records of the University released to any individual, agency, or organization. UVM feels that the following constitutes such information.

Name
Address (including e-mail address)
Telephone number
Dates of attendance
Class
Previous institution(s) attended
Major field of study
Enrollment status
Awards
Honors (including Dean's list)
Degree(s) conferred (including dates)
Past and present participation in officially-recognized sports and activities
Physical factors (height, weight of athletes)
Date and place of birth

Students who do not wish to have the above information released should fill out an information exclusion card at the Registrar's Office.

Academic Options

In addition to the areas of study detailed in the following sections of the catalogue, a number of curricular options are available which provide unique opportunities for UVM students. Students interested in a curriculum focusing on the environment and environmental problems will be interested in the options described in the following section "Studying the Environment."

Education Abroad

The Office of International Education (OIE), located in Room B161 of the Living/Learning Center, is an advising and resource center for students interested in a year, semester, or summer overseas study experience. Study Abroad Advisors maintain extensive information about overseas programs, institutions, and volunteer opportunities. They, in conjunction with UVM Transfer Affairs, help students identify programs appropriate to their needs and arrange credit approval from UVM. All students intending to study overseas and receive transfer credit from UVM are required to visit the OIES and to complete the Study Abroad Approval Form prior to departure. Contact the OIES for deadlines. Official approval is required for students to be guaranteed that their programs of study are eligible for transfer credit and that any financial aid will apply. There is a $400 study abroad fee for semester and year-long programs and a $200 fee for summer programs.

To be approved to study abroad, students must:

1. Have a minimum cumulative GPA of 2.5, or between 2.0 and 2.5 with a minimum semester average of 2.5 for each of the last two semesters prior to studying abroad.
2. Meet the admissions criteria of a University approved study abroad program. University approved programs include those programs on the UVM Approved List.

Students with a GPA above 2.0 who do not qualify under point one above may petition their academic dean for permission to study abroad. Students seeking such permission should request an Academic Eligibility Form from the Office of International Education to be signed by their academic dean.

Students who have been dismissed or are on academic trial are generally not eligible to participate in study abroad programs. Such individuals are encouraged to consult with their individual deans' offices regarding their interpretation of this policy. Under no circumstances will a student on disciplinary suspension the semester before studying abroad, and/or the semester they are scheduled to study abroad, receive official UVM approval for overseas study.

SPONSORED PROGRAMS

The Buckham Overseas Studies Program in England is a scholarship program at the University of Kent, Canterbury, administered by the College of Arts and Sciences and funded through a generous endowment from the Buckham family. The program runs for the full academic year and is designed to provide an opportunity for up to 20 exceptional English majors to spend their junior year at a modern university in an ancient British city. Living and studying in a fully integrated way with English students, the UVM students earn up to 32 credits. Cost of participation, including tuition, transportation, room and partial board, does not normally exceed the costs incurred during a year on the UVM campus.

To apply to the program, a student must be an English major with a cumulative and an English GPA of 3.0 and have earned at least 60 credit hours (including English 85 and 86) by the time the scholarship begins. For further information, contact Prof. Helen Scott, Department of English, 417 Old Mill; (802) 656-4151.

UVM TRAVEL STUDY PROGRAMS

UVM offers several short-term travel study programs. Most of these UVM faculty-led programs are three-credit courses offered during the summer or January break. Previous program locations have included Mexico, England, South Africa, Finland, Honduras, the West Indies, Indonesia, Costa rica, and Cuba. These programs are open to degree students and individuals who have already obtained college degrees. For a complete listing and fee information, visit the Continuing Education website http://uvmce.uvm.edu.

UVM EXCHANGE PROGRAMS

UVM participates in a number of exchange programs with institutions around the world. In an exchange program, all UVM participants pay UVM in-state tuition and fees (and frequently, UVM room, and board) and exchange places with a student from a foreign institution. Exchange programs are a good financial value. These programs provide direct immersion into the academics and culture of the country. Although most exchange programs require a good command of the host language, many offer programs entirely in English.

UVM/University of Western Australia Exchange Program: This program in Perth, Australia, was developed by UVM's School of Natural Resources (SNR), and SNR students will receive priority placement to pursue their studies in natural resources. Courses are also offered in business, arts and sciences, agriculture, Asian studies, and Aboriginal studies. For more information, contact Jan Spencer in SNR or the OIE.

UVM/University of Belgrano Exchange Program: This program in Buenos Aires, Argentina can accommodate various levels of non-native Spanish speakers and students can choose courses in Spanish language and literature, culture, history, economics, and politics. For more information, contact Catherine Connor, Department of Romance Languages, or the OIE.

UVM/University of Lapland Exchange Program: This exchange program in Finland is designed especially for Social Work majors and offers UVM students the opportunity to study social work in English. For more information, contact Stanley Witkin, Social Work Department, or the OIE.

UVM/Sussex Exchange Program: This exchange is located at the University of Sussex in Brighton, England. Sussex is well recognized for both its humanities and social science offerings as well as its science and engineering programs. Twenty percent of the Sussex student body is international. For more information, contact Professor George Moyser, Department of Political Science, or the OIE.

UVM/Augsburg Exchange Program: This exchange is with the Universitat Augsburg, Bavaria, Germany. The UVM student needs to have a solid command of the German language and be pursuing German or European Studies. For more information, contact Professor Dennis Mahoney, Department of German and Russian, or the OIE.

International Student Exchange Program (ISEP): This program enables UVM students to study in 46 different countries in Europe, Asia, Australia, Canada, Africa, and Latin America. Many sites offer instruction in English, as well as in the language of the host country. For more information, contact the Office of International Education.

Kansai Gaidai Exchange Program: Students interested in Japanese language and culture may spend a semester or year studying at this university near Osaka, Japan. For more information, contact Professor Tomiko Hayashi, Area and International Studies, or the OIE.

UVM/Vienna Exchange Program: Students interested in international business may spend a semester or year studying at the Wirtschafts Universität Wien, Vienna, Austria. All courses are taught in English. For more information, contact the School of Business Administration, or the OIE.

UVM/Edith Cowen Exchange Program: This exchange program located in Perth, Australia was developed by UVM's School of Nursing. This provides opportunity for nursing students to take classes in their major overseas. For more information contact Rycki Maltby, School of Nursing, or the OIE.

UVM/Stockholm Exchange Program: This exchange program with the Stockholm Institute of Education, Stockholm, Sweden, provides opportunities for preK-3 education students to study for the spring semester. For more information, contact Dale Goldhaber, College of Education and Social Services, or the OIE.

UVM-AFFILIATED STUDY ABROAD PROGRAMS

Institute for French Studies in Paris: This option provides full-year and semester programs in Paris in a high-quality, all-French immersion program. Courses are offered in French, history, political science, European studies, economics, and art history at IFSP and L'Institut d'Etudes Sociales, la Sorbonne–Paris IV, and l'Institut Nationale des Langues et Civilisations Orientales. Credit-bearing internships in French businesses, international organizations, fashion, art galleries, museums, and schools are possible. The program offers a wide variety of living arrangements and French student peer-advisors. UVM financial aid (but not tuition remission) may be applied to program costs. For information and applications, contact the Department of Romance Languages, UVM.

Semester Program in Grenoble, France, in International Marketing: This program provides an opportunity for students interested in international business, economics, and trade to participate in an English-speaking program while gaining exposure to France's history, language, and culture. For more information, contact the School of Business Administration, 209 Kalkin Hall, UVM.

Junior-Year-in-Salzburg Program: Administered by the University of Maine, this academic-year program at the University of Salzburg, Austria, is open to qualified UVM undergraduates in all major fields. Basic requirements are: completion of sophomore year; two years of college-level German with an average of B; and good academic standing (a cumulative average of 2.5). For information, contact Prof. Helga Schreckenberger, Department of German and Russian, UVM.

The Swedish Program: Sponsored by the University of Stockholm and a consortium of participating American colleges and universities (of which UVM is a member), this non-profit program focuses upon organizations and public policy in every social science discipline. Its curriculum is thematically specific, interdisciplinary, and relevant to the host country (Sweden). For more information, contact Professor Anthony Magistrale, English Department, 400 Old Mill, or the OIES.

OTHER POPULAR STUDY ABROAD PROGRAMS

The following programs are just a few of those on the UVM Approved List. These programs have been especially popular among faculty, staff, and students. For a complete Approved List, contact the Office of International Education, or refer to the OIE website www.uvm.edu/~oie.

American Institute for Foreign Study (AIFS): A publicly owned company, AIFS Inc. is a nationwide organization that provides comprehensive overseas study and travel programs in Argentina, Australia, Austria, the Czech Republic, England, France, Holland, Ireland, Italy, Japan, the Netherlands, Russia, South Africa, and Spain.

Boston University: Boston University offers academic-year, semester, and summer study abroad opportunities in 13 countries on six continents. Several of the program sites provide students with an integrated internship component for a portion of their academic experience and credit. Other program sites feature direct enrollment options in local universities for advanced language students.

Institute for the International Education of Students: This nonprofit organization sponsors programs in Argentina, Australia, Austria, China, England, France, Germany, Ireland, Italy, Japan, and Spain. Semester, year, and summer options are available.

School for International Training (SIT): SIT is an accredited college of World Learning Inc., which was founded in 1932 as The U.S. Experiment in International Living. More than 50 experientially-focused programs are offered in over 40 countries, including the continents of Africa, Asia, and South America. All programs include a Life and Culture Seminar, a Methods and Techniques of Field Study Seminar, an Independent Study Project, a home-stay opportunity, and, if appropriate, an intensive language study.

The Living/Learning Center

The Living/Learning Center is an academic resource whose mission is to create an environment for students to integrate their academic studies and their residential experiences. To expand the intellectual horizons of students, the Center encourages faculty, staff, and student programs that foster innovative and interdisciplinary academic experiences that bring the intellectual life of the University in close alliance with the students' lives outside the classroom. Every program sponsors educational activities to which the entire UVM community is invited, making the Living/Learning Center a focus of campus cultural and intellectual activity. An evening's activities might include a sign language workshop, conversational Russian, artistic performances, gallery exhibits, faculty lectures, or a presentation by one of the Center's programs. In addition to being an academic and student support unit, the Living/Learning Center is also a residence, housing 588 students, as well as faculty and administrative offices, including the Center for Career Development and the Learning Cooperative.

The foci of the Living/Learning Center are the 30 to 35 academic programs, each of which is a year-long plan of course work, independent study, seminars, field trips, and other special activities which support a specific program theme. Recent programs include: Africa House, Geology and Ecology of the Lake Champlain Basin, La Maison Francaise, Creative Writing, The Art of Photography, and Women in Science. Programs are designed and directed by students or faculty members and reflect educational interests of the program leaders and participants. The Center provides a unique environment for each of the University schools and colleges to offer particular curricular elements in an atmosphere which fosters broad opportunities for intellectual discourse.

The first-year, sophomore, junior, and senior students who reside in the Center live with fellow program members in five-, six-, or seven-person suites adjoining a living room and private bathroom facilities. This fosters close friendships and communication among the program members. Suites are located in each of the five interconnected buildings, as are classrooms, laundry rooms, common living rooms and kitchens, as well as apartments for resident faculty and their families. The Center has a reading room/reference library, microcomputer laboratory, music practice rooms, a grocery store, dining hall, preschool, an audiovisual room, Post Office, a central lounge with fireplace, and an art gallery. Through the efforts and expertise of accomplished staff artists, the Center has pottery and photography studios that provide direct program support for the Living/Learning Center community, as well as providing all members of the University community with the opportunity for informal instruction and access to the facilities and equipment.

The Living/Learning Center contributes to the University's mission in its emphasis on the integration of the personal, professional, and intellectual growth of the student. The Center further encourages programs with interdisciplinary, international, and multicultural themes that promote creative excellence. The Living/Learning Center offers the opportunity to be part of a community of people; students, faculty, and administrative staff, who share the goal, work and excitement of improving the breadth and quality of their University experience. To learn more about the Center, visit our web site at http://www.uvm.edu/~llcenter or e-mail us at living.learning@uvm.edu.

Preprofessional Options

Premed and Predental options are available to all students, regardless of major. Advising is coordinated through UVM Career Services, and students are strongly encouraged to consult the Premed/Predental advisor early on and throughout their college career. See http://career.uvm.edu/students/Pre-med.html.

Prelaw advising is available at both UVm Career Services and through several department faculty and staff in the College of Arts & Sciences. See http://career.uvm.edu/students/PRELAW/.

Accelerated Degree Programs

UVM offers accelerated degree and combined bachelor's and master's programs in several areas. These include, but are not limited to, the following:

• **3+3 Veterinary Medicine Program** Students receive a combined BS/DVM from UVM's College of Agriculture and Life Sciences and Tufts University. Students apply during their application for undergraduate admission to UVM.

• **3+3 Law School Program** Students receive a combined BA/JD from UVM and Vermont Law School. Arts and Sciences students may apply to the program after completion of the first year at UVM.

• **Five-Year Combined BS/MS in Computer Science** Computer Science students apply at the end of the junior year at UVM.

• **Accelerated Licensure/Master's in Secondary Education** Education students apply during their junior year at UVM.

• **3+3 BS/MPT Physical Therapy Program** Students may apply at the time they submit their undergraduate application to UVM, or students in the following categories may apply during their junior year: any arts and sciences major; nutritional science majors; biological science majors.

• **4+1 MBA Program** Available to business majors and business minors. Students apply in their junior year.

Consult the Graduate College catalogue or appropriate dean's office for information about these or other accelerated degree programs.

Undergraduate Research

Undergraduate students assist faculty in research in a broad range of fields. Several programs provide research grants for undergraduate students. Notable examples include the HELiX (Hughes Endeavor for Life Science Excellence) and SUGR/FAME (Stimulate Undergraduate Research Experience with Faculty Mentoring) programs. Students are encouraged to consult their dean's office or faculty advisor(s) regarding these and other research opportunities.

Military Studies

Army Reserve Officers' Training Corps (ROTC) Program

The Army ROTC program offers men and women the opportunity to develop leadership and management skills that lead to an officer commission as a second lieutenant in the United States Army, Army Reserve, or Army National Guard.

Department Course Offerings The four-year Military Studies program at UVM consists of a two-year Basic Course (first-year and sophomore year) and a two-year Advanced Course (junior and senior year).

Interdepartmental Course Offerings The Military Studies Department also offers one-credit courses in related fields on behalf of the UVM Department of Physical Education including: PEAC Course 014-Orienteering, Course 017-Military Fitness, and Course 019-Backpacking. These courses are open to all UVM students. Students incur no military obligation for taking these courses.

Army ROTC Scholarships and Financial Aid
Scholarships: Two-, three-, and four-year Army ROTC Scholarships paying up to $17,000 per year are available to qualified applicants. Application for the four-year Army ROTC scholarship is made during the high school senior year by applying electronically at www.armyrotc.com. All other Army ROTC scholarship applications are made through the Department. *Note:* Private UVM Army ROTC Alumni Scholarships and loans are also available for ROTC students.

Financial Aid: Non-scholarship contracted junior and senior students can earn up to $2,750 a year through simultaneous participation in Army ROTC and the Vermont National Guard. For more information on other Vermont National Guard benefits, contact the Army ROTC Dept. at 656-5757.

Subsistence Allowance All contracted scholarship and non-scholarship cadets receive a living stipend for 10 months of the school year – 1st year as Sophomore = $250 a month; Junior = $300; Senior = $350. Students receive travel allowances to and from all required military schooling away from the University. Those who attend advanced summer camp will receive approximately $750.

The offices of the Department of Military Studies are located at 128 University Heights, (802) 656-2966. E-mail: uvmrotc@zoo.uvm.edu. UVM ROTC homepage: www.uvm.edu\~uvmrotc.

Continuing Education

Continuing Education's programs, available on campus, in the workplace and around the state, meet the needs of

career changers, professionals and returning students of all ages, including many UVM alumni, undergraduate and graduate students. In addition to credit courses, professional conferences and seminars are available to local and national audiences.

The main offices of Continuing Education are located at 322 South Prospect Street, (802) 656-2085/(800) 639-3210. E-mail: EveningUniversity@uvm.edu. Our website is http://learn.uvm.edu.

ADVISING

Advising services are available to anyone enrolled in Continuing Education or who may be interested in enrolling in the future. Advisors are well versed in non-traditional student issues, available to answer questions about educational opportunities at the University, and can refer potential students to the appropriate offices when necessary. In addition to discussing admission and academic requirements, advisors also help resolve administrative problems and answer questions about University policy. Call (802) 656-2085 or toll free (800) 639-3210 for an appointment. Email: learn@uvm.edu.

EVENING PROGRAMS

Hundreds of credit courses are offered at non-traditional hours (evening, weekends) on- and off-campus during the fall and spring semesters. Registration occurs before the beginning of each semester. Courses are announced in the Continuing Education catalogue, FOCUS, which is available at the CE and other UVM offices, and, online learn.uvm.edu.

Guaranteed Admission Program (GAP)

This program provides an avenue of entry to the University of Vermont for students who are not prepared to enter under standard admission criteria. In the Guaranteed Admission Program, academic advisors work with students to design sequences of courses that will prepare them for matriculation. Admission to UVM is guaranteed upon successful completion of a contract of approved academic credit courses taken through Continuing Education. The program is administered cooperatively by Continuing Education, Undergraduate Admissions, and the deans' offices of the colleges and schools within UVM.

Evening Degrees

Opportunities to complete undergraduate degrees through courses offered after 4:00 p.m. are available in English, Sociology, Mathematics, Psychology, and Studio Art. A minor in Women's Studies is also available.

Certificate Program in Gerontology

A Certificate in Gerontology is offered for professionals currently working in fields relating to aging and others interested in such fields. The 18-credit certificate focuses on the sociological, psychological, and biological changes in the aging population and presents courses from a number of academic disciplines.

Certificate in Healthcare Management

A cohesive series of courses focus on the education needs of healthcare professionals with management responsibilities. Program content crosses healthcare disciplines and offers training necessary to make critical management decisions. Students enrolled in this advanced-level certificate have access to a broader array of faculty and academic disciplines than if they enrolled in a more disciplined specific management training program.

Certificate in Computer Software

The Department of Computer Science and Continuing Education jointly offer a software certificate that requires five courses (15 credits) in approved computer courses at UVM. The curriculum includes an introduction to commonly used application software packages and programming courses involving both high- and low-level computer languages. The certificate enables students to receive acknowledgment of college credit in computer software and to determine their aptitude in computer science.

Postbaccalaureate Pre-Medical Preparation Program

A sequence of courses gives people with a bachelor's degree in a nonscience area the preparation they need for admission to medical and other health professional schools. Those interested in applying should pay careful attention to the specific requirements of the schools of medicine, dentistry, veterinary, or other health science programs to which they intend to apply. The required courses in laboratory sciences and mathematics are accessible through a combination of day and evening courses. Prospective medical school applicants receive individual advisement through all phases of the medical school application process.

Study Assisted Program

The Learning Cooperative and UVM Continuing Education offer courses each semester which include free tutoring services and assistance with study skills. This collaborative service gives new and returning students academic support as they reenter the academic environment.

SUMMER PROGRAMS

During May through mid-August, hundreds of credit courses are offered. Summer University courses provide opportunities to get ahead, catch up, focus on pre-med requirements, participate in an internship, study abroad, and explore new topics. In addition, Summer University meets the professional education needs of teachers and school administrators, engineers, business managers, human services professionals, nurses, and school librarians.

Special attention is given to providing undergraduate courses that are in high demand during the academic year. In addition, there are field courses, on-line courses, special seminars, and intensive workshops. Summer University provides a financial advantage through lower tuition. A FOCUS catalogue of courses is available in March in print as well as online at learn.uvm.edu.

For more information about day and evening summer courses: (802) 656-2085 or (800) 639-3210 or visit learn.uvm.edu.

Note: Undergraduate students should verify with their advisor and dean that any CE course would be applicable to their degree program. Students not officially admitted to the Graduate College who wish to enroll for more than six graduate credits in one semester must receive permission from the Graduate Dean.

COURSES AND PROGRAMS AVAILABLE STATEWIDE

Through the use of distance technologies, many graduate and professional courses and programs are available statewide. Courses are available online or are taught live on campus and are delivered by interactive television to various sites around Vermont. For more information, call 800-639-3210 or 802-656-2085 or visit online at learn.uvm.edu.

NON-CREDIT COURSES AND PROGRAMS

Continuing Education offers noncredit learning opportunities for UVM students, alumni, and their peers in business and professions. National conferences, symposia and workshops provide access to new information developed through University research, explore contemporary issues, and teach career skills. Detailed information on programs is available from Continuing Education, 800-639-3210 or 802-656-2085 or visit online at learn.uvm.edu.

Student Exchange: New England State Universities

The six New England land-grant universities (Universities of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut) participate in an exchange program to enable students at the subdegree level to take advantage of a course or combination of courses not available at the home institution. In order to participate in the program, state university students must:

1. Identify a course or combination of courses related to their area of academic interest and not available on the home campus.
2. Receive permission from the appropriate university exchange authorities at both the sending and receiving institutions.
3. Meet minimum eligibility requirements which include the following: In general, students must be in good standing and have at least a 2.50 grade-point average; must be degree candidates; and must be at least first semester sophomores (application may be made as early as the second semester of the first year). There is no upper limit in terms of class standing on participation.

Exchanges may not exceed a total period of two academic semesters, but these need not be taken consecutively. Summer sessions are not considered part of the exchange program. Course work approved by the student's host institution and completed satisfactorily is fully transferable to the home institution. Transferability of grades and inclusion in grade-point averages are subject to home institutional policy.

The student will pay normal tuition and required fees to the home institution and room and board (where applicable) to the host institution. Students on financial aid must contact their home institution's financial aid office to determine eligibility for continued scholarship assistance.

Participation in the exchange program will not affect a student's residence status either at the home or host institution, nor does participation improve or prejudice possibilities for transfer.

For information, contact the Office of the Provost, 349 Waterman Building, University of Vermont.

Studying the Environment

One of the distinctive features of UVM is its focus on studying the environment and environmental problems. Students interested in these issues have a rich array of choices. Many of these are within specific disciplines, but others offer the opportunity for multidisciplinary study. UVM has several multidisciplinary degree programs.

Environmental Studies is a curriculum offered to students from four different colleges and schools (Agriculture and Life Sciences, Arts and Sciences, Education and Social Services, and Natural Resources) and is coordinated within the Environmental Program.

Two distinct degree programs are offered in **Environmental Sciences**. The program in the College of Arts and Sciences provides a *basic* Environmental Sciences major with emphasis in biology, chemistry, or geology. The School of Natural Resources and the College of Agriculture and Life Sciences jointly offer an Environmental Sciences major with *applied* emphases in water resources, environmental analysis and assessment, conservation biology and biodiversity, ecological design, environmental resources, and agriculture.

The College of Engineering and Mathematics offers students the opportunity to pursue a degree in **Environmental Engineering**.

Environmental Studies

Environmental Studies is a University-wide undergraduate curricular option offering students several challenging academic programs. Directed by the Environmental Program in cooperation with several colleges and professional schools, this option is one of UVM's most distinctive and popular academic programs — unique nationally in its breadth and interdisciplinary nature.

Students entering UVM may apply for admission to Environmental Studies through several of the undergraduate divisions. Choice of the appropriate college or school will depend on the individual's interests, career and educational objectives, and selection of one of the program options outlined below.

The Environmental Program involves students and faculty from throughout the University, as well as community professionals, recognizing that study of the environment must draw upon all academic disciplines and professional fields. The activities of the Program include undergraduate education, research, and community service programs dedicated to the study and improvement of the cultural and natural environments essential to the quality of life on earth.

The Program serves a wide range of environmental interests, with its primary mission being undergraduate education, and its primary focus the individual student. Working closely with the faculty, each student plans an individualized program that combines a broad, comprehensive understanding of the environment with depth in a specific discipline or profession. Major concentrations can be in the natural or technical sciences, the humanities or arts, the social sciences or professions, or broadly interdisciplinary.

Many graduates continue their education in graduate or professional schools; others work in public and private sectors in highly diverse fields throughout Vermont, the nation, and in countries around the globe.

Program offices and a Student Services Center are located in The Bittersweet, where students are encouraged to visit with the staff and faculty regarding their academic plans, to gain assistance with research or action projects, and to seek information about academic programs, internships, international study opportunities, graduate studies, and future careers.

DEGREE PROGRAMS

The Bachelor of Science degree in Environmental Studies is awarded through the College of Agriculture and Life Sciences and the School of Natural Resources.

The Bachelor of Arts degree in Environmental Studies is awarded through the College of Arts and Sciences.

DEGREE REQUIREMENTS

Students must complete the distribution and credit-hour requirements of their college or school and one of the following programs. Incoming students will be assigned an advisor in the Environmental Program who will assist in selecting a major or minor program.

CURRICULUM

The curriculum in Environmental Studies offers students several alternatives leading to an individualized program of studies. The Major in Environmental Studies provides a unique academic program for the student seeking an interdisciplinary major leading to the B.S. or B.A. degree, with opportunity for Honors Studies. The Minor in Environmental Studies fulfills the minor requirement for students in the College of Arts and Sciences and is available as an elective minor in other schools and colleges. For selected students, a double major offers the opportunity for combining interdisciplinary studies with a traditional major.

MAJOR IN ENVIRONMENTAL STUDIES This interdisciplinary major offers students the opportunity to combine studies in several disciplines and professional fields. In addition to a core of interdisciplinary courses, each student's program includes an individually-designed plan of study directed toward newly-developing careers and graduate study programs. It is equally suited to the student seeking a broad liberal education with an environmental emphasis and to the student focusing on a particular science, humanities, social studies, or technical discipline.

The Major in Environmental Studies is a selective program for qualified students with well-conceived academic goals. Admission to the major (regardless of declared major at the time of admission to UVM) requires submission of an application to the Environmental Program during the sophomore year, approval of the Director, and successful completion of Environmental Studies 151. In addition to course requirements, this major includes a required senior research thesis or project that may qualify for program, college, or school honors recognition. Requirements for Secondary Education majors differ. Consult the appropriate sections of this catalogue for the exact requirements of each college or school.

Environmental Studies Major Core

Required Courses:	Credit Hours
Intro. to Environmental Studies (ENVS 1)	4
International Environmental Studies (ENVS 2)	4
Intermediate Environmental Studies (ENVS 151)	3
Research Methods (ENVS 201)	3
Senior Project and Thesis (ENVS 202/203)	6 - 12

(Planned and designed in ENVS 201; credit arranged in consultation with senior thesis advisors)

Individually-Designed Program

Individually-designed program of studies	18 - 30

(Intermediate and advanced courses, including courses in natural sciences, humanities, social sciences, and international studies)

Students are strongly encouraged to undertake internships, independent projects, study abroad, and cross-cultural experiences.

MINOR IN ENVIRONMENTAL STUDIES For students in several colleges and schools, this program combines the basic interdisciplinary skills and perspectives necessary for the understanding of environmental issues with the curriculum of a traditional disciplinary major.

In addition to two introductory Environmental Studies courses and at least three intermediate or advanced ENVS courses, students complete a major in a related discipline or professional field.

Students in the College of Arts and Sciences may elect this minor to fulfill the minor requirements in that college. Minor programs are available on an elective basis in most other schools and colleges.

Consult appropriate sections of this catalogue for the exact requirements of each college or school.

COLLEGE OF EDUCATION AND SOCIAL SERVICES TEACHER EDUCATION STUDENTS Students enrolled in Early Childood, Elementary Education, Family and Consumer Services and Physical Education may complete the major concentration in Environmental Studies as a fulfillment of the liberal arts and sciences major requirement. Environmental Studies is not a Vermont State Department of Education approved endorsement area for Secondary Education.

Environmental Sciences

Students with an aptitude for science and an interest in the quality of the environment can choose alternate pathways in pursuing a major in Environmental Sciences at UVM. The College of Arts and Sciences offers a science education with an emphasis on basic science approaches to understanding the environment. The School of Natural Resources and the College of Agriculture and Life Sciences jointly offer a science-based education emphasizing the application of scientific skills and knowledge in addressing complex environmental problems.

Environmental Sciences: School of Natural Resources or College of Agriculture and Life Sciences

The School of Natural Resources and the College of Agriculture and Life Sciences jointly administer an Environmental Sciences major intended to provide students with the fundamental knowledge and hands-on experience needed to identify, analyze, and solve "real world" environmental problems arising from human activities. This major is specifically tailored for students interested in pursuing careers as knowledgeable and skilled environmental scientists or advanced studies in graduate programs. Students have a unique opportunity to "earn while they learn" through credit-bearing internships with government agencies or private companies (for details, consult the Internship Coordinator, Room 335, Aiken Center for Natural Resources). Students interested in research can participate with our faculty in nationally- and internationally-recognized environmental research programs. Excellent academic advising is a demonstrated strength of both the School and the College.

Five specially created Environmental Sciences courses designed to augment basic biology, chemistry, and mathematics courses serve as the foundation of the SNR/CALS Environmental Sciences major:

ENSC 1	Introduction to Environmental Sciences
ENSC 101	Pollutant Movement Through Air, Land and Water
ENSC 130	Global Environmental Assessment
ENSC 201	Recovery and Restoration of Altered Ecosystems
ENSC 202	Ecological Risk Assessment

In order to provide flexibility yet assure some depth of knowledge, students explore a particular aspect of Environmental Sciences through advanced study in one of several advising tracks. Students can select:

Water Resources — effects of pollutants on the structure and function of aquatic ecosystems.

Environmental Analysis and Assessment — techniques for measuring environmental impacts and managing environmental data.

Environmental Design — use of ecological systems to improve environmental quality.

Agriculture and the Environment — impacts of agriculture on the environment and strategies for minimizing environmental degradation.

Conservation Biology and Biodiversity — endangered species and ecosystems, and strategies for conserving the diversity of the earth's life forms.

Environmental Resources— environmental processes in air, soil, and water.

Students can also propose a self-designed track in a particular area of interest such as energy and the environment.

DEGREE REQUIREMENTS

Students must complete the distribution and other requirements of either the College of Agriculture and Life Sciences (CALS) or the School of Natural Resources (SNR) in addition to the following specific requirements of the Environmental Sciences curriculum.

A. Environmental Sciences basic science/quantitative courses:*

Biology 1,2, Principles of Biology
Chemistry 31,32, Introductory Chemistry
Chemistry 42, Intro. Organic Chemistry
Geology 55, Environmental Geology *or* Plant and Soil Sciences 161, Intro. to Soil Science
Math. 19, 20 (or 13,14), Calculus
Natural Resources 140, Nat. Res. Biostatistics *or* Statistics 141, Basic Statistics

*Two of these courses simultaneously fulfill School of Natural Resources general education requirements.

B. Special foundation courses: Environmental Sciences 1, 130, 101, 201, 202.
C. Advising track requirements (14 credits) in any one of: Water Resources, Environmental Analysis and Assessment, Ecological Design, Agriculture and the Environment, Conservation Biology and Biodiversity, *or* Environmental Resources. Detailed lists of courses for each advising track and requirements for the self-designed track are available in the Dean's Offices in both the College of Agriculture and Life Sciences and the School of Natural Resources.

Internships and Undergraduate Research. Experiential learning is strongly recommended. Students enroll in Environmental Sciences 195 (Internship) or Environmental Sciences 196 (Independent Research) for up to six hours each. Three credit hours from either of these experiences may be used to meet a portion of the 14 credit-hour requirement for an Environmental Sciences advising track. Both courses require a formal proposal and the approval of the Program Director.

Consult the sections of the catalogue on the College of Agriculture and Life Sciences and the School of Natural Resources for a description of the specific requirements of the programs.

Environmental Sciences: College of Arts and Sciences

The basic Environmental Sciences major in the College of Arts and Sciences provides students with a modern environmental science degree in the context of a liberal arts college. It is tailored for students who want an interdisciplinary science degree that is centered around environmental issues. It emphasizes basic approaches to understanding the environment and environmental problems. Students completing this major will have the scientific background necessary to compete in the job market for environmental science, or to continue with advanced studies in a graduate degree program. This major emphasizes flexible course choices at the upper level, guided by co-advisors from different departments who work with each student individually.

During the first two years, the major draws on a core curriculum of basic science courses in biology, chemistry, and mathematics. This core is designed so that students can easily flow between other science majors, such as Biology, Geology, and Chemistry. At the upper division level, students work closely with faculty advisors to develop a set of science courses that will meet their particular needs and career goals.

Learning through experience and advising are integral parts of this major. To experience environmental research first hand, an independent research project or honor thesis is completed in the senior year. Co-advisors help with research and also with choices of courses and career plans.

At the upper division level, students can be general in their choice of courses *or* three areas of concentration allow students to specialize their training.

Environmental Biology – ecological and molecular analysis of endangered populations, conservation biology, conservation genetics, and ecology.

Environmental Geology – earth science, geomorphology, and the analysis of ground water.

Environmental Chemistry – analytical methods for measuring and monitoring air, ground, and water pollutants.

Consult the College of Arts and Sciences section of the catalogue for specific requirements for the major.

DEGREE REQUIREMENTS

The Environmental Sciences major within the College of Arts and Sciences is jointly administered by the Biology and Geology Departments. Students must complete the distribution and other requirements of the College of Arts and Sciences, in addition to the following Environmental Sciences curriculum.

A. Core courses:

Biology 1,2, Principles of Biology, or Biology 11, 12
Chemistry 31,32 (or 35), Intro. Chemistry
Chemistry 42, 141, or 143, Intro.Organic Chemistry
Math. 19,20 (or 21), Calculus

B. Environmental Studies 1 or 2, Introduction to Environmental Studies.

C. Technology course (one of the following in second year):

Statistics 141 or 211, Statistics
Chemistry 121, Quantitative Analysis
Chemistry 221, Instrumental Analysis
Biology 205, Advanced Genetics Lab.
Biology 267, Molecular Endocrinology
Geology 255, Geohydrology
Civil Engineering 150, Environmental Engineering

D. Concentration requirements: With co-advisors students choose three advanced courses (one with advanced lab if not taken above and one at the 200 level) for a generalist approach or concentration.

Undergraduate Research. An independent research project is an important requirement of the major. Students enroll in Biology 198 or Geology 198 (Undergraduate Research) or Honors 208, 209 (Honors in Biology) or Honors 226, 227 (Honors in Geology). These courses require a formal proposal and final report.

ENVIRONMENTAL ENGINEERING

Refer to the engineering curricula for a description of the requirements for the Environmental Engineering option offered by the College of Engineering and Mathematics.

The College of Agriculture and Life Sciences

The programs of the College of Agriculture and Life Sciences (CALS) emphasize life sciences, agriculture and food systems, environmental protection, and the preservation of healthy rural communities. The College is committed to providing educated professionals knowledge to help solve important societal problems, and to insure a sustainable, vital healthy Vermont and globe.

The College performs the four public functions which include teaching, conducting research, disseminating information to the public, and performing related services. These four areas of work are performed by CALS in cooperation with the Agricultural Experiment Station, and The University of Vermont Extension.

The College faculty strive for excellence in undergraduate education as evidenced by a sustained and enviable record of University teaching award winners. The College emphasizes the importance of each individual student and promotes significant student-faculty interaction. Students are provided with a firm foundation in the social and life sciences in order to excel and meet the challenges in future professional careers. Faculty and peer advisors provide a broad range of support, to help students develop high-quality academic programs that meet individual needs.

Opportunities abound for off-campus experiences such as internships, independent study, and study abroad. Graduates of the College are successfully meeting the requirements to pursue advanced education. Career choices are broad, but focus primarily in agribusiness, dietetics, international and rural development, agriculture, veterinary and human medicine, biotechnology, nutrition, research and teaching, horticulture, and botany.

Academic majors are enhanced by the on-campus and field facilities, labs, and research for which the College is renowned. Many CALS faculty working through the Experiment Station conduct mission-oriented, applied agricultural research, and faculty encourage undergraduate research.

The College of Agriculture and Life Sciences welcomes applications from international students. The specific procedures and requirements are listed in the Admissions section presented earlier in the catalogue.

The Office of the Dean of the College is located in Rooms 106 and 108 in Morrill Hall.

ORGANIZATION

The College's instructional units include six departments: Animal Science; Botany and Agricultural Biochemistry; Community Development and Applied Economics; Nutrition and Food Sciences; Microbiology and Molecular Genetics (a department shared with the College of Medicine); Plant and Soil Sciences; and interdepartmental programs in Biological Sciences Biochemistry, Environmental Sciences, and Environmental Studies.

DEGREE PROGRAMS

The Bachelor of Science degree is awarded for the following programs:

- Agricultural and Resource Entrepreneurship
- Animal Sciences – concentration in:
  - Dairy Production/Farm Management
  - Equine Science
  - General Animal Science
  - Preveterinary/Preprofessional Science
- Biochemical Science
- Biological Sciences
- Botany
- Community Development and International Development
- Dietetics
- Environmental Sciences
- Environmental Studies
- Microbiology
- Molecular Genetics
- Nutrition and Food Sciences – concentration in:
  - Nutrition Education
  - Nutrition and Food Sciences
  - Sports Nutrition
- Plant and Soil Science – concentration in:
  - Agroecology
  - Horticulture
  - Environmental Soil Science
- Self-Designed Major
- Sustainable Landscape Horticulture
- Undecided

DEGREE REQUIREMENTS

All programs in the College of Agriculture and Life Sciences lead to the Bachelor of Science degree and require:

A. The successful completion of a minimum of 120 credit hours of course work plus two credit hours in physical education.

B. A minimum cumulative grade-point average of 2.00.

C. Completion of the CALS Core Curriculum (see below)

D. Completion of AGRI 195, "New Beginnings" by all first semester first-year students in the College of Agriculture and Life Sciences.

E. One course addressing race relations and ethnic diversity for all (incoming first-year, incoming transfer and internal transfer) CALS students. Students may enroll in EDSS 011, the one-credit Race and Culture course, or may choose from a CALS faculty-approved list of alternative 3-credit courses: ALANA 51, ALANA 55, SOC 19, SOC 31, SOC 118, SOC 119, ANTH 187, EC 153, GEOG 60, HST 60, HST 68, POLS 29, POLS 129, CMSI 160, ENG 57. Students choosing the 3-credit course option satisfy 3 of the 6-credit social science distribution requirement.

F. All courses as specified in individual program majors.

The applicability of courses to specific areas is based on content and not departmental label. Courses taught in the College of Agriculture and Life Sciences can be used to fulfill *knowledge* core curriculum requirements; however, they must be taken outside the department in which the student's program of study is located. Applicability of courses to fulfill requirements rests with the student's advisor and, if necessary, concurrence of the Dean of the College.

Students in the College of Agriculture and Life Sciences may not take more than 25 percent of their course credits in the School of Business Administration.

CALS CORE CURRICULUM

(http://www.uvm.edu/~jleonard/CALS/core.html.)

A. Knowledge

Students develop a fundamental base of knowledge that will serve as a foundation for lifelong learning.

1. Science: Students use the scientific method to understand the natural world and the human condition.

   a. Physical and Life Sciences: *Competency may be met by satisfactory completion of two courses in such subjects as: anatomy, animal science, biology, botany, chemistry, ecology, entomology, food science, forestry, geology, genetics, microbiology, nutrition, physics, physiology, plant science, and soil science.*

   b. Social Science: *Competency may be met by satisfactory completion of two courses in such subjects as: anthropology, community development, economics, geography, history, political science, public policy, psychology, and sociology.*

2. Humanitites & Fine Arts: Students develop an understanding and appreciation for the creative process and human thought. *Competency may be met by satisfactory completion of two courses in such subjects as art: classics, history, literature, music, philosophy, religion, language, theater.*

B. Skills

Students develop abilities and use tools to effectively communication, analyze, problem solve, think critically and work with others.

1. Communication Skills: Students express themselves in a way that is easily understood at a level that is appropriate for the audience.

   a. Oral: Students show confidence and efficacy in speaking before a group. *Competency may be met by satisfactory completion of AGRI 183 (or equivalent) or AGRI 195 where primary focus is public speaking, and an additional course or series of courses in which students present a minimum of three graded speeches, in total, to a group.*

   b. Written: Students effectively communicate in writing. *Competency may be met by satisfactory completion of any English writing course and an additional course or series of courses that uses the writing process (redrafting) for a minimum of three graded papers in total.*

2. Information Technology: Students demonstrate mastery of technology for communication, data gathering and manipulation, and information analysis. *Competency may be met by satisfactory completion of AGRI 85 (or equivalent) or AGRI 195 and an additional course or series of courses that uses computers for a minimum of two applications in total.*

3. Quantitative Skills: *Students demonstrate the ability to understand and use numbers.*

   a. Mathematics: Students demonstrate the use of numbers for problem solving. *Competency may be met by satisfactory completion of Math 9 or higher.*

   b. Statistics: Students demonstrate the use of numbers for data analysis and inference. *Competency may be met by satisfactory completion of Statistics 111 or higher or NR 140.*

   c. Quantitative Skills Application: Students apply mathematics or statistics skills in a course relevant to their major. *Competency may be met by satisfactory completion of one course that utilizes principles from math or statistics.*

4. Critical Thinking Skills: Students demonstrate ability to comprehend, judge, and present written/oral arguments and to solve problems. Students learn how to distinguish between fact, conjecture, and intuition. *Competency may be met by satisfactory completion of any course or series of courses in which students solve problems and analyze, judge, and construct arguments.*

5. Interpersonal Skills: Students demonstrate the ability to work well with other people by understanding and using skills of leadership, conflict resolution, and group process. *Competency may be met by satisfactory completion of any course or series of courses that includes leadership, working in diverse groups, conflict resolution, and group process.*

C. Values

Students are exposed to values that are expressed through relationships with community, the environment, and themselves that are consistent with the mission of the College of Agriculture and Life Sciences and the University of Vermont campus compact known as "Our Common Ground."

1. Citizenship & Social Responsibility: Students develop an understanding, appreciation and empathy for the diversity of human experience and perspectives. Students are exposed to solving problems for a community and contributing to the common good. *Competency may be met by satisfactory completion of EDSS 11 (or equivalent) and one other course or series of courses that exposes students to these values.*

2. Environmental Stewardship: Students develop a sensitivity for the interconnected relationship between human beings and the natural world and the responsibility for stewardship of the environment. *Competency may be met by satisfactory completion of two courses or a series of courses that expose students to these values.*

3. Personal Growth: Students develop an understanding and appreciation of a healthy lifestyle and a love for learning that will lead to continuous growth and development throughout their life-span. Students continue to improve self by developing and affirming the values of respect, integrity, innovation, openness, justice, and responsibility. *Competency may be met by satisfactory completion of AGRI 195, two credits of physical education, and one other course or series of courses that exposes students to these values.*

REGULATIONS GOVERNING ACADEMIC STANDARDS

The College of Agriculture and Life Sciences (CALS) Studies Committee reviews the semester grades of all students in the college whose semester or cumulative grade- point average falls below the 2.00 minimum, as well as the academic progress of all students placed on academic probation the previous semester. Detailed information may be obtained from the CALS Student Services Office, 106 Morrill Hall, (802) 656-2980.

Guidelines A student whose semester grade-point average falls below a 2.00 will be placed "on trial" and will be given a target semester average to achieve by the end of the following semester. A student whose semester grade-point average is below a 1.00, or who fails to achieve the stated target average while "on trial," may be placed on "intermediate trial." Any student with a prolonged history of poor grades, including students who consistently fail to achieve the target semester average, may be placed on "final trial." A student who does not achieve the target semester grade-point average while on "final trial" is a candidate for dismissal from the University.

Appeal A student may appeal a dismissal by submitting a written appeal to the CALS Studies Committee within two

working days of the receipt of the dismissal letter. The student will be asked to appear in person before the Studies Committee to appeal the case.

Continuing Education and Readmission A student who has attempt to improve his/her grades. To gain readmission to the College, the student must achieve no less than a 2.67 semester average on the six credits. Dismissed students may enroll in six credits at another institution, and should work with the Office of Transfer Affairs to insure transferability.

COLLEGE HONORS PROGRAM

The College Honors Committee promotes and encourages independent study by recognizing those students who especially excel in their creative, innovative, responsible, and independent pursuit of study. Honors Committee Guidelines for student projects may be obtained in the Student Services office in Morrill Hall or they are available on the CALS web page at http://www.uvm.edu/cals/awards/honors.htm.

Independent study can be an important aspect of a student's education. Undergraduate research, independent projects, and internships or field practica are examples of independent study which benefit students as they pursue graduate study or seek employment. Over the years a number of undergraduate research projects have been published in well-known scientific journals; and manuals, videotapes, and other products of special projects have been incorporated into classes to enhance the learning environment in the College.

The completed study, in a form appropriate to the area of study, is evaluated first by a departmental review committee. Independent studies of the highest quality will be chosen for College Honors by the Honors Committee. Students are recognized at College Honors Day.

JUSTIN MORRILL HONORS PROGRAM

The Justin Morrill Honors Program in the College of Agriculture and Life Sciences (CALS) is a four-year program designed for highly qualified and motivated students desiring an academically challenging undergraduate experience in the broad areas of the life sciences and agriculture. Justin Morrill Scholars will be engaged in honors studies throughout their academic careers to include first-year seminars conducted by renowned scholars from the University of Vermont and other institutions. They will enroll in special honors courses in the college and will have the opportunity to do independent research with faculty from CALS and across campus. Cultural events and field trips will complement the strong academic component. Entering first-year students with outstanding academic records will be invited to participate in the program. Scholars will be required to maintain a minimum grade point average of 3.5, participate in program activities, enroll in honors classes and successfully complete a Senior Honors Thesis.

Matriculated students in CALS who demonstrate academic excellence during the course of their program may also apply to become a Justin Morrill Scholar.

PREPROFESSIONAL PREPARATION

Students striving for admission to professional colleges, such as dentistry, medicine including naturopathic, chiropractic, osteopathic, and veterinary medicine, can meet the undergraduate requirements for these programs through enrollment in the College of Agriculture and Life Sciences. Upon admission, each student will be assigned a faculty advisor knowledgeable in preprofessional preparation. Competition for admission to professional schools is very keen, and a superior academic record throughout an undergraduate program is necessary to receive consideration for admission. Due to the intense competition, only a small percentage of those first-year students declaring an interest in professional schools are admitted after completion of the baccalaureate. Consequently, students must select a major, in an area of their choice, to prepare them for a career other than medical sciences. The preprofessional requirements will be met concurrently with the major requirements for the B.S. degree. Students interested in human medical sciences often enroll in either biochemistry, biological sciences, nutrition and food sciences, microbiology or molecular genetics. Those interested in veterinary medicine usually enroll in animal science or biological sciences.

Each student prepares a four-year program of courses, with the guidance of a faculty advisor, to meet requirements for a B.S. degree in their major. It is recommended that students complete the following courses to meet minimum requirements of most professional schools. It is the responsibility of each student to contact the professional schools of choice to determine the exact entrance requirements.

Human Medical and Dental Schools:

Biology with laboratory		Biology 1, 2
Chemistry with laboratory:	inorganic	Chemistry 31, 32
	organic	Chemistry 141, 142
Physics with laboratory:		
with math		Physics 11/21, 12/31
with calculus		Physics 31/21, 42/31
Mathematics (requirement varies)		Math. 19, 20

Humanities, Social Sciences, Languages

Students must complete the minimum College requirements in this area that includes English composition and speech. Advanced composition and additional courses in this area are encouraged as time allows.

Veterinary Medical Schools: All of the courses listed above under Human Medical Schools plus:

Biochemistry	Ag. Biochemistry 201/202
Written English	English 50 or 53
Genetics	Botany 132 or Biology 101
Microbiology	Micro. and Mol. Genetics 101
Nutrition	Animal Sciences 43

Several schools require a course in introductory animal sciences, vertebrate embryology, or statistics. Students should consult their advisor regarding specific requirements for the various veterinary schools.

Finally, both human and veterinary medical schools want to see a history of interest in medicine. It is important for students to work with physicians or veterinarians and gain firsthand knowledge of their chosen profession. Volunteer or paid work in hospitals, nursing homes, or emergency centers is important. Commercial farm experience is also valuable for preveterinary students.

Students applying to the College of Agriculture and Life Sciences who express an interest in medicine or preveterinary medicine should present evidence of high performance in high school level science and mathematics courses, plus additional supporting documentation such as high SAT scores, strong letters of recommendation, and a motivational summary statement.

PREVETERINARY HONORS PROGRAM

The College of Agriculture and Life Sciences and Tufts School of Veterinary Medicine offer a seven-year B.S./D.V.M. program to selected honors students. Students who

meet rigorous eligibility criteria may enroll for three years of study at UVM majoring either in Animal Science or Biological Sciences. After completion of about 90 credits with a minimum GPA of 3.25 each year, the student enters Tufts School of Veterinary Medicine. The student will be awarded a B.S. degree from The University of Vermont following the successful completion of the first year of the D.V.M. program at Tufts. The successful student will earn a D.V.M. degree from Tufts School of Veterinary Medicine after the fourth year at Tufts.

Prospective students must apply to both UVM and Tufts University. Both applications may be obtained from the UVM Admissions Office. Candidates' files are first reviewed at Vermont, and admissible student applications are then forwarded to Tufts for their evaluation. Students will be notified of the results of these reviews through the UVM admissions process. Absolute standards may vary from year to year, but this is an intensive program with limited places. We expect that successful candidates will have:

1. Excellent grades in high school biology, chemistry, physics, and mathematics. It will be advantageous to have completed or be enrolled in AP (advanced placement) biology, AP calculus, and AP chemistry.
2. Standardized test scores at or above the 80th percentile nationally.
3. A class rank in the top ten percent of their high school class.
4. Some appropriate animal and/or veterinary experience.

It is important to recognize that some excellent students may not be admitted to the joint B.S./D.V.M. because of space limitation. These students may be admitted to UVM as preveterinary students and complete four years at UVM, graduate with a B.S. degree, and apply to any of the veterinary schools in the nation. There are many options to meet individual educational goals.

For information regarding admissions and applications to this exciting new program, see the Admissions section of this catalogue and contact the Admissions Office, 194 S. Prospect Street, Burlington, VT 05401-3596. For specific program information contact Dr. Karen Plaut, Chair, Animal Science, College of Agriculture and Life Sciences, 102 Terrill Hall, UVM, Burlington, Vermont 05405, 802-656-0155.

BIOLOGICAL SCIENCES CORE

Students who have strong academic ability in the sciences and are excited about the future, concerned with contemporary issues, and want a challenging, dynamic career should consider the Biological Sciences major (see our Web page for career opportunities: http://www.uvm.edu~biosciences(biosci.html). This program is designed to provide flexibility in developing a strong and broad background in the biosciences. Students can take advantage of the entire array of University course offerings by selecting basic and applied biology courses from departments within the College (Animal Science, Botany, Nutrition and Food Sciences, Microbiology and Molecular Genetics, and Plant and Soil Science) and across the campus (Anatomy and Neurobiology, Forestry, Natural Resources, Pathology, Pharmacology, Molecular Physiology and Biophysics, Wildlife and Fisheries Biology, and Biology). Selection of courses is not limited to CALS.

The Biological Sciences Program is interdisciplinary and draws on the expertise of faculty from five departments within the College. Each student is assigned a personal faculty advisor who helps the student select courses, develop career plans, and establish contacts in the field. The core program is rigorous and designed to provide a broad exposure to different aspects of biology in the first and second years. Students refine their developing interests and specializations during the remaining two years by selecting electives and courses that fulfill the requirement for the B.S. degree in Biological Sciences in a manner that complements the student's interests. Alternatively, students transfer, as late as the beginning of their third year, to one of the traditional, biologically-based departments of CALS to complete their degree.

In addition to the general College requirements listed previously, the Biological Sciences core requires satisfactory completion of: BSCI 195, Biology 1, 2; Math. 19, 20 or Math 21, 22; Chemistry 23, 42 or Chemistry 31, 32 and 141, 142; Botany 132 or Biology 101 (genetics); and Microbiology and Molecular Genetics 101. Course descriptions are presented under the appropriate departments.

MAJORS: DEPARTMENTAL REQUIREMENTS

Animal Science

Domestic animals play a major role in our lives through agriculture, recreation, biomedical science, and companionship. The mission of the Department of Animal Science is to provide a high quality, broad-based education emphasizing domestic animals and their interactions with humans.

Our graduates enter the veterinary or other professions, biomedical science, the agribusiness industry, companion animal care and breeding, zoos and aquaria, or education. Additionally, many students use a B.S. in Animal Science as a stepping stone to careers in business and commerce. To provide the necessary flexibility to achieve this diversity students work closely with faculty advisors to individualize their programs.

To facilitate and reduce the costs of veterinary education of excellent students, the Department of Animal Sciences and the Tufts University School of Veterinary Medicine have established a highly competitive seven-year B.S./D.V.M. program. For further information on this highly competitive option contact the Department of Animal Science directly at (802) 656-2070. Some limited veterinary scholarships are also available for upper-level students.

For students interested in dairy production, the UVM/VTC Dairy Farm Management 2 + 2 Program provides Vermont residents with scholarships and the opportunity to earn a B.S. after a two-year Associate's Degree in Dairy Farm Management from the Vermont Technical College.

An option for the outstanding student with an interest in a graduate degree is the Accelerated Master's in which students commence study for their master's degree in their senior year and have the potential to obtain a B.S./M.S. in a five-year period.

The Department of Animal Science actively encourages participation in undergraduate research, internships, and study abroad. By combining classroom, laboratories, and practical experience students maximize their performance in a friendly environment and develop responsibility for and control over their education.

ANIMAL SCIENCE The program deals with a range of options from basic sciences through companion and zoo animal care to farm management. Although programs are highly individualized by students working with the advisors, there are four basic options:

Preveterinary/Preprofessional Science: This is the option for students most interested in the basic sciences who prob-

ably intend to enter veterinary, professional, or graduate school. It provides the necessary background in science as well as the opportunity for advanced study related to production and companion animals.

Equine Science: Specialized courses are offered on the care, management, breeding, training, and health of horses. The world-famous Morgan Horse Farm at Middlebury, about 45 minutes from campus, is also part of the Department and offers opportunities for study and research. Students may also enroll in equine courses at the Miner Agricultural Research Institute in Chazy, New York.

Dairy Production: Designed for the student seeking an in-depth training in dairy herd management with strong links to agribusiness and an emphasis on experiential learning. Can be integrated with the two-year Associate Degree program in Dairy Management as a four-year program.

General Animal Science: Under this option, students design a program to suit their needs, or keep a broader-based program to meet a particular career goal. For example, this option is often used by students who have an interest in human/animal interactions, animal welfare, and companion animals. The student and advisor select a combination of basic science, production, or companion animal courses and balance these with courses available elsewhere in the College or University. Usually involves an internship experience.

Core Courses for All Animal Science Majors

Animal Sciences 1, 43, 110, 122, 141, 281, plus two additional Animal Science courses.
Biology 1
Chemistry 23 or 31
Chemistry 26 or 42 or 141
Computer Science 2 or New Beginnings AGRI 195
A genetics course (Biology 101 or Botany 132)
Math. 9 or higher
Statistics 111 or 141 or 211

Additional courses are selected with the help of the advisor.

In addition, each student must complete all College and University requirements for graduation.

A Possible Curriculum in Preprofessional Science

First Year	Hours
New Beginnings	6
Cultural Diversity	1-3
Inorganic Chemistry	8
Math. through Calculus	6
Intro. Animal Sciences	4
Written English	3
Biology	4
Electives*	0–6

Sophomore Year	Hours
Organic Chemistry	8
Biology	4
Statistics	3
Animal Biology	4
Fundamentals of Nutrition	3
Electives*	4–10

Junior Year	Hours
Animal Welfare	3
Animal Feeding	4
Biochemistry	4
Microbiology	4
Physics	8
Speech	3
Career Seminar	1
Electives*	3–9

Senior Year	Hours
Clinical Veterinary Med.	3
Animal Health	3
Physiology of Reproduction or Endocrinology	4
Biochemistry	4
Career Seminar	1
Genetics	3
Electives*	12–18

*Include courses to meet college requirements and advanced courses for specific options. Many of the electives are normally taken in advanced science options.

A Possible Curriculum in Dairy Production

First Year	Hours
New Beginnings	6
Cultural Diversity	1-3
Intro. Animal Sciences	4
Organic Chemistry	4
Inorganic Chemistry	4
Mathematics	3
Principles of Agr. and Res. Econ.	3
Microcomputer Applications	3
Written English	3
Electives**	4–10

Sophomore Year	Hours
Animal Biology	4
Principles of Animal Feeding	4
Fundamentals of Nutrition	3
CREAM	4
Biology	4–8
Small Business Management	3
Statistics	3
Electives**	2–4

Junior Year	Hours
Dairy Cattle Judging	2
Advanced Feeds	2
Cattle Breeding	2
Business Finance	3
Advanced Dairy Management	15
Accounting	3
Electives**	3-9

Senior Year	Hours
Reproductive Physiology	4
Lactation Physiology	3
Agriculture and Food Policy	3
Field Experience	12
Electives**	8-14

A Possible Curriculum in Equine Science

First Year	Hours
New Beginnings	6
Cultural Diversity	1-3
Intro. Animal Sciences	4
Inorganic Chemistry	4
Written English	3
Biology 1	4
Organic Chemistry	4
Mathematics	3
Electives**	3–6

Sophomore Year	Hours
Animal Biology	4
Fundamentals of Nutrition	3
Intro. Equine Studies	4
Emergency First Aid	2
Principles of Animal Feeding	4
Princ. Economics	3
Small Business Management	3
Electives**	3–6

Junior Year	Hours
Physiology of Reproduction	4
Microbiology	4
Intro. Plant Sci.	3
Equine Reproduction and Management	3
Speech	3
Animal Welfare	3
Statistics	3
Equus	3
Electives**	6-8
(Summer Internship Recommended)	

Senior Year	Hours
Equine Training Techniques	3
Practical Equine Management	3
Forage Crops	3
Horse in Health and Disease	3
Equine Industry Issues	3
Career Seminar	1
Genetics	3
Equine Internship	3-6
Electives**	5-8

**Include courses to meet college requirements and advanced courses for specific options.

Biochemistry

Biochemistry is the basic science that explores the chemical and physical properties of living organisms and the chemical changes that occur in these organisms. It is integral to the study of multiple disciplines within the life- and biomedical-sciences, including biology, chemistry, microbiology, genetics, anatomy, physiology, pharmacology, nutrition and food sciences, animal sciences, botany, and plant sciences. The Bachelor of Science in Biochemistry degree is an interdisciplinary undergraduate degree program offered through the College of Agriculture and Life Sciences (CALS) and the Collge of Arts and Sciences (CAS) in conjunction with the College of Medicine (COM). It draws upon a broad set of University resources from CALS, CAS, and COM to provide students with a modern science-based education designed to emphasize fundamental knowledge of chemistry and biology along with advanced courses specializing in biochemistry and related life- and biomedical-sciences. The Biochemistry curriculum offers students with a strong academic ability in the sciences an opportunity to explore upper-level courses in areas of modern biochemistry and is designed to meet the needs of students wishing to compete in the job market at the B.S. degree level as well as students planning to continue with advanced studies in a graduate or professional degree program.

Students may apply to the program either through CALS or CAS, which vary in their college distribution requirements. In CALS, students are required to fulfill the Core Competencies in knowledge, skills, and values, with emphases on science, humanities and fine arts, communication skills, information technology skills, quantitative skills, critical thinking skills, interpersonal skills, citizenship & social responsibility values, environmental stewardship values, and personal growth values. In CAS, students are required to fulfill distribution requirements in foreign language, fine arts, literature, humanities, social sciences, and cultural diversity. In addition to these college distribution requirements, all students must take a core set of basic courses in the sciences and mathematics in their first two years followed by advanced courses in biochemistry, chemistry, and/or molecular biology in their third and fourth years. As biochemistry is a "hands-on" science, involvement of students in undergraduate research projects, most of which qualify as honors projects, is strongly encouraged. Each student within the Biochemistry degree program is assigned a faculty advisor from the program's faculty and the College in which the student is pursuing his/her degree. This faculty advisor works closely with the student to develop their academic interests, degree requirements, and career goals.

In addition to the CALS or CAS college distribution requirements, the Biochemistry core requires satisfactory completion of BIOL 1, 2 *or* BIOL 11, 12; MATH 21, 22; PHYS 31, 42 with 21/22; CHEM 35, 36; CHEM 143,144; CHEM 221; CHEM 162; CHEM/BIOC/MMG 205; CHEM/BIOC/MMG 206; CHEM/BIOC/MMG 207; CHEM 282; BOT 132 *or* BIO 101; MMG 102 *or* BIOL 103; and advanced Biochemistry electives.

Biological Sciences

(http://www.uvm.edu/~bioscncs/biosci.html)

Some of the most exciting and controversial developments in our society are in the biological sciences. Biotechnology is providing the opportunity for plant and animal cloning, genetic engineering of plants, animals, and microbes, *in vitro* fertilization, embryo transfer and sexing, and production of biologically-produced chemicals.

The Biological Sciences major starts with the Core Program. In conjunction with a personal faculty advisor, each student plans a curriculum appropriate for individual career goals. Students are urged to participate in undergraduate research and to work one-on-one with a faculty scientist on the cutting edge of research. While each program of study is personalized, all graduates must complete the College requirements and the following major requirements: Biological Sciences Core plus one semester each of general biology, anatomy, biochemistry, ecology, physiology, statistics, and two semesters of physics. In addition, each student must satisfactorily complete an undergraduate research project or two advanced biological science courses at the 200 level or above. These courses may be selected from the diverse offerings of departments throughout the University. This program requires the successful completion of 122 credit hours of courses to earn the Bachelor of Science degree.

Possible Four-Year Curriculum

	1st SEMESTER		2nd SEMESTER
FIRST YEAR			
New Beginnings	3		3
Cultural Diversity	1-3		–
Biological Sciences Colloquium	1		–
Biology 1, 2	4		4
Chemistry 31, 32†	4		4
English 1	3	or	3
Nutrition 43	–		3
Computer Appl. 85	3	or	3
Physical Educ. Activities	1	or	1

	1st	2nd
SECOND YEAR	SEMESTER	
Organic Chem. 141, 142†	4	4
Anatomy/Physiology 19, 20†	4	4
Calculus 19, 20†	3	3
Statistics 141†	3	–
Physical Educ. Activities	1	–
Electives*	0	3

	1st	2nd
THIRD YEAR	SEMESTER	
Physics 11/12	4	4
Physics 21/22	1	1
Microbiology 101	4	–
Genetics, Botany 132†	3	–
Speech, AGRI 183†	–	3
Electives*	3-6	6-9

	1st	2nd
SENIOR YEAR	SEMESTER	
Biochem. 201	3	–
Biochem. Lab 202	1	–
Undergrad. Res. 197, 198†	3	3
Ecology, Botany 160†	–	4
Electives*	8-11	8-11

*Electives include selection of courses to meet the College requirement for social sciences and the humanities and fine arts. Electives may be used for a double major, minor, advanced biology, or simply general interest courses. Sequence of courses may be modified with guidance of advisor.

†Selected from list of alternative courses fulfilling requirements of the major.

Excellent students with a strong preveterinary medicine interest may apply to the new seven-year B.S./D.V.M. program between the College of Agriculture and Life Sciences and Tufts University School of Veterinary Medicine. Students may enroll either in the Biological Sciences Program or the Department of Animal Science to complete the UVM portion of this program leading to the B.S./D.V.M.

The specific courses to be taken for this option start with the Core Program of the College as discussed previously. In addition, each student will be required to successfully complete the following courses and credit hours within the three-year period:

Biology	8
Calculus	4 or 6
Inorganic Chemistry	8
Organic Chemistry	8
Biochemistry	4
Physics	10
Microbiology	4
Nutrition	3
Genetics	3
General Biology	3
Anatomy	3
Physiology	3
Ecology	3
Undergrad. Research	6
English 50 (recommended)	3

For specific program information contact the Director of the Biological Sciences Program at (802) 656-2982

Botany

Our undergraduate program is designed to provide flexibility and personal attention. Each student plans an individualized program of study in consultation with a faculty advisor. Students have many opportunities to interact closely with faculty through field, lab and research experiences. Areas of student research interest include ecology, evolution, cell and molecular biology, growth and development, and physiology (see our departmental web page for a list of completed student projects). Popular study opportunities include our biennial trip to Costa Rica and student-initiated research projects at our internationally known Proctor Maple Research Center or at the Pringle Herbarium, the third largest plant collection in New England. To learn more about our undergraduate program, visit the Botany Department web site at www.uvm.edu/plantbio/index.html.

Options for our Majors: Our students select from three concentrations: General Botany, Plant Molecular Biology, and Ecology and Evolutionary Biology of Plants. Basic courses that are required for all the concentrations, and additional courses specific for each concentration are listed below. Students may petition the department to substitute similar courses for those listed. Study of a modern foreign language is encouraged for those attracted to the many international career opportunities in plant biology.

Basic Course Requirements (29-32 hours) – required for all concentrations:

Biology 1, 2
Botany 104, 132
Chemistry – see specific concentration
Math 13, 14 or 19, 20 or 21, 22
Physics – one semester with laboratory
Statistics – one course (141, 211, or NR 140)

General Botany Concentration: This concentration offers broad training at all levels of plant biology ranging from molecular biology to plant communities. Students have the flexibility to study plants from many perspectives and to understand how the diverse areas are interrelated. Students, in consultation with a faculty advisor, can choose courses that meet their individual needs and interests. Students are encouraged to perform undergraduate research working directly with departmental faculty on laboratory or field projects in plant biology.

In addition to the basic course requirements for our departmental major (listed above), this concentration has the following requirements and electives:

Concentration Requirements (29 hours):
Botany 108 or 109, 160
Chemistry 31, 32, 141, 142
Physics – one additional semester, with laboratory

Concentration Electives (1-20 hours)
Botany – 5 additional courses, at least two of which are at the 200 level.

Ecology and Evolutionary Biology of Plants: This concentration offers broad training in organismal biology, with emphasis on population and physiological ecology, community structure and function, and plant evolution and diversity. Students choose from a menu of options in fulfilling most requirements; this flexible curriculum enables students to select from a wide range of courses while achieving proficiency in the ecology and evolution of plants. Students are encouraged to initiate an independent research project with one of our faculty.

In addition to the basic course requirements for our departmental major (listed above), this concentration has the following requirements and electives.

Concentration Requirements (28 hours):
Botany 108, 109, 160
Chemistry 31, 32, 141, 142

Concentration Electives (12-24 hours) – At least six courses

from the following, at least two of which must be 200-level Botany courses.

Ag. Biochem 201, 202
Biology 102, 203, 238, 254, 264, 270
Botany 117, 205, 209, 213, 223, 232, 234, 241, 260, 261
Env. Sci. 101, 201
Forestry 21, 120, 121, 122, 225, 228, 234
Geography 81
Geology 1, 55, 151, 101
MMG 220
Nat. Res. 220, 224, 260
Plant and Soil Sci. 151, 161, 215

Plant Molecular Biology: This concentration focuses on the inner workings of plants at the molecular, cellular, and organismal level. Although the basic cellular functions of plants are the same as those of animals, plants face unique challenges and have evolved interesting solutions. To understand the unique biology of plants within a context of what is known about other organisms, courses examining the biochemistry and molecular biology of plants are supplemented by courses on the molecular functions and development of other organisms. In addition to coursework, students are encouraged to get hands-on laboratory experience by taking advantage of the many opportunities to participate in independent research with department faculty.

In addition to the basic course requirements for our departmental major (listed above), this concentration has the following requirements and electives:

Concentration Requirements (40 hours):

Ag. Biochem 201, 202, 220
Botany 261
Chemistry 31, 32 or 35, 36; 141, 142
MMG 101, 102
Physics – an additional semester with lab (31/42 or 11/12)

Concentration Electives (8-15 hours) – at least four courses from the following list:

Ag. Biochem. 191, 221, 230, 250
Animal Sci. 230
Botany 109, 117, 205, 256, 257
Biology 263, 265
MMG 220, 225, 240
Nutrition 243
Pharmacology 272, 290

Community Development and Applied Economics

The Department of Community Development and Applied Economics (CDAE) expands and promotes the use of economic, social, and environmental principles to develop sustainable communities locally and globally.

Students in CDAE will focus on the application of economic principles and their relationship to leadership and management, economic and business development, environmental sustainability, and social responsibility. You may choose a major from two areas of study: Agricultural and Resource Entrepreneurship or Community and International Development.

Agricultural and Resource Entrepreneurship:
With Vermont as your laboratory, you will acquire knowledge in applied economics and skills in management, strategic planning, marketing, and public policy related to developing or operating a small, natural-resource-based business.

Community and International Development:
Building on a strong, applied economics base, you will acquire the knowledge, skills, and values necessary to address rural economic and policy problems locally and globally.

As a major in CDAE, you will complete the core curriculum of the College of Agriculture and Life Sciences to fulfill knowledge, skills, and values competencies. You also will complete CDAE's core requirements, which focus on community decision-making, policy development, leading and managing change, all within a global perspective. After you complete eight required core courses in CDAE, you will follow the curriculum guides for your major.

CALS Core Curriculum – Both Majors (39-43 credits)

Communication Skills	Hours
English 1	3
AGRI 183 or other approved course*	3
One additional communications course (either oral or written)	3
Quantitative Skills	
Math 19	3
Statistics 141	3
AGRI 085*	3
Science	
Two courses in physical or natural science	6-8
Arts and Humanities (two courses)	6
Social Science	
Political Science 21	3
Economics 11	3
Physical Education	2
College Requirements	
New Beginnings	6
Cultural Diversity	1-3

*First year students take New Beginnings in place of AGRI 183 and AGRI 085. Transfer students take AGRI 183 and AGRI 085 in place of New Beginnings.

CDAE Core courses – Both majors: CDAE 002, CDAE 015, CDAE 061, CDAE 102, CDAE 127, CDAE 157, CDAE 166, CDAE 255, ECON 171, ECON 172, and Internship/service learning requirement.

Required courses for Agricultural and Resource Entrepreneurship major: BSAD 065, CDAE 167, CDAE 168, CDAE 264, CDAE 266, and CDE 267.

Required courses for Community and International Development major: Students must complete 6 of the following 8 courses: CDAE 146, CDAE 171, CDAE 218, CDAE 237, CDAE 250, CDAE 251, CDAE 272, and CDAE 273.

The Department also offers five minors: Agricultural and Resource Entrepreneurship; Applied Design; Consumer Affairs; Consumer and Advertising; and Community and International Development.

Environmental Sciences

Students may major in Environmental Sciences through the College of Agriculture and Life Sciences, the College of Arts and Sciences, or the School of Natural Resources. For general information about the curriculum, see the Environmental Sciences section.

Environmental Sciences majors through the College of Agriculture and Life Sciences must fulfill the following requirements for graduation:

A. General CALS distribution requirements.
B. Core distribution requirements for major (also fill distribution requirements): Animal Sci. 1, 230; Comm. Dev. and Appl. Ec. 2; Plant and Soil Sci. 11; Botany 160; Micro. and Molec. Genetics 101.
C. Environmental Sciences minimal basic science/quantitative courses (also fill distribution requirements): Biology 1,2; Chemistry 31, 32; Chemistry 42*; Geology 55 or Plant and Soil Sci. 161**; Math. 19, 20; Nat. Res. 140 or Statistics 141.

*Students should consider taking Chemistry 141/142.
**Plant and Soil Sci. 161 is required for many advanced PSS courses in several curricular concentrations; most students should take this course.

D. Environmental Sciences foundation courses: ENSC 1, 101, 130, 201, 202.
E. Concentration requirement, 14 credit hours in one of following: ***Water Resources, Environmental Analysis and Assessment, Ecological Design, Agriculture and the Environment, Conservation Biology and Biodiversity, Environmental Resources.*** Detailed lists of courses for each concentration are available from the Program Director and the Office of the Dean.

Environmental Studies

The Major in Environmental Studies is an interdisciplinary program available to qualified students upon approval of the Director of the Environmental Program.

Environmental Studies students majoring through the College of Agriculture and Life Sciences must complete a minimum of 122 credit hours, including two hours of physical education, with a minimum GPA of 2.0, and fulfill the following requirements: (1) the general CALS distribution requirements; (2) the Environmental Studies Major Core and the Individually-Designed Program: 30 credit hours of approved environmentally-related courses at the 100 level or above, including three hours at the 200 level, with at least one course in each of the following areas — natural sciences, humanities, social sciences, and international studies (may be fulfilled by study abroad experience).

Microbiology and Molecular Genetics

Undergraduates who undertake studies in the Department of Microbiology and Molecular Genetics receive instruction in the classroom and in state-of-the-art teaching and research laboratories. The Department offers either a Microbiology or a Molecular Genetics major or minor as well as courses in the areas of molecular genetics, general, clinical, and environmental microbiology, virology, and immunology which are available to students in other programs. Numerous research opportunities provide undergraduates with close interactions with faculty at the cutting edge of microbiology using molecular genetics technology.

The Microbiology and Molecular Genetics core courses total 55 credits. The courses comprising the core are: biology, biochemistry, genetics, inorganic and organic chemistry, mathematics, general microbiology, molecular genetics, physics, and statistics. In addition to the core requirements departmental majors take a minimum of 15 credit hours from an array of approved elective courses including undergraduate research. As their core requirements, minors take microbiology, molecular genetics, and genetics plus additional credit hours of courses as required. Students interested in the Accelerated Masters Program should contact the Department.

Outstanding students with an interest in a graduate degree may apply to enter the Accelerated Masters Program of the Department. In this program students commence study for their master's degree in their senior year and have the potential to obtain a B.S./M.S. in a five-year period.

See Minors in this section.

Nutrition and Food Sciences

The Department of Nutrition and Food Sciences (NFS) prepares students to enter the rapidly expanding field of dietetics, food science, nutrition, health, and fitness. Nutrition and Food Science, unique fields of study, are rooted in the physiological, chemical, and biochemical sciences but are comprehensive in scope since they integrate knowledge learned in the social and psychological sciences. The faculty in the department believe that excellence in teaching, research and undergraduate student advisement are critical components of their responsibility to undergraduate education. Through formal course work, field experience, and independent research, students prepare themselves in the biochemical, psychological, and socioeconomic aspects of diet, nutrition and foods. Thus NFS majors are able to meet the current and future needs in nutrition and food science and assume innovative, leadership roles in society and industry.

The course credits earned in NFS provide background in preventive and therapeutic nutrition as well as nutrient requirements for human growth, development, health, and fitness throughout the life cycle. Other courses focus on the physical, chemical, and nutritional properties of food, food safety, and consumer aspects of food related to socio-economic status, life style, cultural beliefs, and health. Although a series of courses providing knowledge in these areas is required of all majors, each student has a generous amount of free elective credits to pursue personal interests.

It is possible for students to meet the requirements for more than one program option (for example, Dietetics majors are also double majors in Nutrition and Food Sciences) or combine a major in this department with another area of study (e.g. Athletic Training). In addition, department majors may elect to meet the undergraduate requirements needed for admission to medical schools (including naturopathic, chiropractic, or osteopathic) or graduate school in nutrition, food science, sports nutrition, or family and consumer sciences.

Depending on current interests and future plans, majors may select one of four department options:

Dietetics: Dietetics is a profession concerned with the science and art of human nutritional care, an essential component of human health science. The Didactic Program in Dietetics is currently granted approval by the Commission on Accreditation for Dietetics Education of the American Dietetic Association, 216 W. Jackson Blvd., Chicago, IL 60606-6995, 312/899-5400. This program prepares students for careers as Registered Dietitians by providing the undergraduate requirements needed to apply to dietetic internships.

To become a Registered Dietitian, students must complete our Didactic Program in Dietetics; complete an ADA approved supervised practice/internship program and pass the National Registration Examination for Dietitians. Dietetics majors are also double majors in Nutrition and Food Sciences. This double major prepares graduates to counsel people about the preventive and therapeutic role of nutrition in the maintenance of health and fitness.

Nutrition and Food Sciences: This customized major is designed to provide a strong background in preventive nutrition, food science, and basic science, with an opportunity to integrate course work in medical, biochemical, biological, physiological, psychological, and sociological sciences or business. This option can prepare students for careers in the commercial food processing industry or in professions where the knowledge of food and beverage, nutrient content of foods, eating behavior, and the role of food in society is critical. The demand for qualified professionals with education and training in the food science arena greatly exceeds the number of

graduates available thus making this option highly desirable for the career motivated student.

Students may also elect to fill the academic and practical application requirements needed to become an Athletic Trainer. Upon graduation, students selected for the athletic training option will be prepared to take the National Athletic Trainers Association certification examination (see description of Athletic Training concentration. Alternately, students may choose the Nutrition and Food Science – Masters in Physical Therapy (MPT) Program called the 3+3 program. In the 3+3, all NFS requirements must be completed in three years and the student must apply for matriculation into the MPT. Upon completion of the first year of the MPT program, the student will be awarded the Bachelor of Science degree in Nutrition and Food Sciences.

Through appropriate selection and advisement, students in either DIET or NFS may meet the undergraduate requirements needed for admission to medical school (including naturopathic, chiropractic, or osteopathic) or graduate school in nutrition, food science, sports nutrition, or family and consumer sciences (see the Master of Arts in teaching Program description in the Department of Integrated Professional Studies).

Course requirements for all Department Majors

I. General Education Studies for all Majors	Hours
A. Communication Skills	6
English 1 (or equivalent)	
Speech: AGRI 183 (or equivalent)	
B. Fine Arts and Humanities	6
Two unspecified courses	
B. Social Science Core	6
Psychology 1	
Sociology 1 or 109, or	
Social Work 47	
C. Basic Science Core*	20
Chemistry 23 (or 31); 42 (or 141)	
Anatomy and Physiology 19-20	
Biochemistry 201 and 202	
D. Analytic Sciences Core*	9
Statistics 111 (or equivalent)	
Computer Science: AGRI 85, or	
CS 2 or 3 (or equivalent)	
Mathematics 9 or higher	
E. New Beginnings, AGRI 195	6
Cultural Diversity	1-3
F. Physical Activity	2
Two unspecified courses	

*Students planning to attend medical or graduate school should have biology (one year), chemistry (two years), and physics (one year); plus calculus (one year) is recommended.

II. Department Core Requirements for all Majors	25
Nutrition and Food Sciences (NFS) 43, 44, 53, 54, 143, 153, 154, 203, 243, 253	
III. Department Major Requirements	
A. ***Dietetics***	25
NFS 123, 150, 250, 260, 261, 262, 263; Business Administration 120.	
Electives	20-42
B. ***Nutrition and Food Sciences***	
1. *Nutrition and Food Sciences*	12
In consultation with the student's academic advisor, select four additional didactic courses, at least two of which must be at the 200 level.	
Electives	33-55

For Athletic Training add EDPE 23, 46, 157, 158, 166, 167, 185, 186, 187, 188, 200, PEAC 28

Plant and Soil Science

The Plant and Soil Science program allows students to expand their knowledge of science and apply it to plant production, landscape design, and to environmental issues related to plants and soils. The faculty represent the disciplines of agronomy, horticulture, entomology, plant pathology, and soil science. Our program provides a unique, interdisciplinary opportunity for studying plant/soil ecosystems that are managed for food, feed, or fiber production, for landscape purposes, or for recycling/waste utilization.

The program integrates classroom and field experiences and incorporates relevant environmental, social, and economic issues into the curriculum. Faculty help students develop individualized courses of study to match their interests and career goals. The following are areas of concentration within the program:

Agroecology: A goal of this concentration is to develop a knowledge base and skills to critically analyze and address issues related to sustainable agriculture.

Horticulture: This concentration provides students with the knowledge and skills needed for challenging careers in the "green" industry and in the production of fruits and vegetables.

Environmental Soil Science: Students learn how the soil affects the transport and remediation of environmental contaminants in both natural and agricultural ecosystems.

The Plant and Soil Science faculty are actively involved not only in teaching but in research that is targeted at solving agricultural and environmental problems. Students are encouraged to become involved in on-going research projects or to develop independent learning experiences with the guidance of a faculty member. In addition, opportunities exist for off-campus internships that provide valuable work experience and insights into professional careers.

Required Core Courses (18–20 hours):

Plant and Soil Science 11, 106, 161, 162; Botany 4; Botany 104, 117; Inorganic Chemistry 23 or 31; Organic Chemistry 26, 42, or 141; Math. 9 or equivalent; Statistics 111, 141, 211 or Natural Res. 140; plus a minimum of 18 credits made up of at least six additional courses in Plant and Soil Sciences at the 100 level or above, excluding PSS 195, 196, 197, 198, so as not to include independent studies and special topics unless approval is obtained from the student's advisor.

For more complete information see our home page at http://pss.uvm.edu.

Sustainable Landscape Horticulture

Sustainable Landscape Horticulture provides a professional education in the use and care of trees, shrubs, lawn grasses, and other plants in the human environment.

The program integrates professional training in landscape design and the plant sciences with courses in business and the liberal arts. The emphasis is on the preparation of students for the changing future and a variety of careers in the expanding field of Sustainable Landscape Horticulture. Students are encouraged to participate in internships related to their studies.

This interdisciplinary program is coordinated by the Department of Plant and Soil Science; student majors in the program are therefore enrolled in Plant and Soil Science.

Sustainable Landscape Horticulture

Required Core Courses:

Plant and Soil Science 11, 106 or 107, 123, 125, 131, 132, 145, 161, 162; Forestry 21; Comm. Dev. and Appl. Econ. 61, 166, *or* Business Administration 120; Botany 4; Botany 104 *or* Forestry 225; Botany 117 or Forestry 234; Botany 160 or Forestry 120 or Natural resources 103; Natural Resources 25; Chemistry 23; Math. 10; Statistics 111, 141, 211 or Natural Res. 140.

The Self-Designed Major

Undergraduate students have the opportunity to define a personalized program of study when their personal educational objectives fall outside curricula defined by departments and programs of the College. The requirements for a Self-Designed Major are specified in a "Guide for Proposal Development and Submission," available through the Student Services Dean's Office in 108 Morrill Hall. Each student is asked to formulate their own program of study by working in association with a faculty advisor and the committee of faculty which oversees the major. Designing a major requires examination of personal goals and acquiring information about formal courses and other possible learning experiences (e.g. internships, independent studies, special topics studies, and independent research). The information is then formulated into a package of proposed course work and other learning experiences.

The objective is to design a coherent and unique plan of study to meet the specific learning needs of the student and by which the student will achieve an advanced state of skills, knowledge, and values in their chosen field. The student must justify the designed package in two ways: (1) value to the student; (2) uniqueness and deviation from curricula already available. The Self-Designed Major usually comprises about 60+ credits of study in the junior and senior years (after the College core requirements have been fulfilled).

The design of the Major is itself an intensive learning experience; therefore, students should plan to spend some time each week over the course of one semester while self-designing the Major.

MINORS

SPECIFIC MINOR REQUIREMENTS

Any student in the College interested in enrolling in one of the following minors should contact the department administering the program. If accepted, the student will be assigned a "minor advisor" from that department who must approve all program plans and course selections.

Students in the College may enroll, on a space available basis, in minors listed under the School of Natural Resources and in minors offered campus wide.

Agricultural and Resource Entrepreneurship: 15-16 credits including CDAE 166, 167, 168, and 266, plus one course (3-4 credits) from the following restricted electives: CDAE 157, 264, or 267.

Animal Science: Five courses with a minimum of 15 credit hours including Animal Science 1; two courses selected from 43, 110, 122, 141, 205, 215 or 216; two courses selected from 113, 115, 117, 118, 161, 163, 213, 214, 220, 230 231 or 233. At least three credits must be at 200 level or above.

Applied Design: Nine credits in required courses: CDAE 15; 1 or 16; 101 or 231 plus two additional elective courses at or above the 100 level, approved by the student's advisor to define an applied design focus for a total of 15 credits.

Biological Science: Biology 1 and 2 plus a sequence of three semester courses (nine to 12 credits) in the biological sciences selected with advice of the faculty advisor and approved by the program chair. The courses are selected to provide a relevant extension of the student's major program into the biological sciences.

Botany: At least 15 hours of course work to include Botany 4 or Biology 1 or 2; plus three additional courses in Botany, at least one at the 200 level.

Community and International Development: A total of 15 credit hours with nine from required courses CDAE 2, 61, and 171; and six hours from a list of restricted electives as follows: CDAE 166, 167, 196, 218, 237, 253, 255, 272, 273, or 296.

Consumer and Advertising: Fifteen credits including CDAE 15, 127, 128, 183, and an advisor-approved elective.

Consumer Affairs: 15 credits including CDAE 127, 128, 157, and 159, plusone of the following restricted electives: CDAE 102, 250, or 255. Note: CDAE majors must take CDAE 250 as their "elective."

Consumer Economics: Fifteen credit hours including 9 credits in required courses CDAE 127, 157 and 255; and six credit hours from restricted electives: CDAE 102, 128, 158, 159, 250.

Environmental Studies: Seventeen hours of Environmental Studies including 1, 2; nine hours at the 100 level or above, with at least three hours at the 200 level and may include one non-ENVS course with the approval of a student's advisor and Program Director.

Microbiology: Core requirements are MMG 101 and 102, Botany 132, plus an additional six credit hours of MMG courses chosen from MMG 195/196, 201, 203, 211, 220, 222, 223, 225, 295/296 depending on student needs.

Molecular Genetics: Core requirements are MMG 101, 102, 211, and Botany 132, plus an additional six credit hours of MMG courses chosen from MMG 195/196, 201, 203, 223, 225, 295/296 depending on students needs.

Nutrition and Food Sciences: A total of fifteen credit hours in Nutrition and Food Sciences, 9 credit hours consisting of 43, 53, 143, and six credits of NFS courses from the following: 63, 123, 150, 153, 165 or any 200-level course approved by the student's minor advisor that will define a particular focus. Independent study, field experience and undergraduate research cannot be counted in this total.

Plant and Soil Science: Sixteen credits including Plant and Soil Science 10 or 11, 161, plus an additional 9 credits in Plant and Soil Science courses at the 100 level or above.

Small Business: Fifteen-16 credits including 12 credits in required courses CDAE 166, 167, 168, 266; one course three-four credits from the following restricted electives: CDAE 157, 169, 264, 267.

Sustainable Agriculture: Fifteen hours including nine in required courses ASCI 230 or CDAE 208, CDAE 61 and PSS 152; three or four credits from the following restricted electives: ASCI 110, 113, 115, 118, 213, 214, 215, 220, 231, 233, 234, 264 or CDAE 171, 205, 218, 272, 273 or PSS 106, 161, 122, 123, 124, 125, 127, 127, 138, 141, 145, 154, 210, 215, 217, 221, 232; and a three- to six-credit hour internship: AGRI-SPECIAL TOPICS, ASCI 197 or 297, CDAE 196, or PSS 197 or 297.

The College of Arts and Sciences

The College of Arts and Sciences at UVM combines the advantages of a small liberal arts college and the resources of a major research institution. It provides students with a sound liberal education through close interaction with nationally and internationally noted scholars. This close interaction helps students acquire knowledge and scholarly discipline that enables them to think critically about issues they will confront in their professional and personal lives. The College's academic programs acquaint students with the intellectual, cultural and aesthetic heritage of our complex world. Our programs also seek to prepare students for entry into rewarding careers in a variety of fields and for advanced study that may be prerequisite to other opportunities. More and more professional schools, corporate managers and graduate schools seek individuals who have a fine liberal arts background.

In UVM's College of Arts and Sciences students are encouraged to develop depth and breadth of knowledge, and critical thinking and communication skills that are the hallmarks of a liberal education. Students begin developing these skills in a first-year seminar, and as they complete degree requirements they have the opportunity to explore a wide range of disciplines spanning literature, the humanities, the fine arts, foreign languages, the natural and social sciences and mathematics. The College offers over forty majors from which students may choose.

The offices of the Dean of the College of Arts and Sciences are located in Waterman Building.

ORGANIZATION AND DEGREE PROGRAMS

The Bachelor of Arts degree program may be completed with an approved major in one of the following fields:

- Anthropology
- Area & International Studies
- Art History
- Art – Studio
- Biology
- Botany
- Chemistry
- Classical Civilization
- Communication Sciences
- Computer Science
- Economics
- English
- Environmental Studies
- French
- Geography
- Geology
- German
- Greek
- History
- Latin
- Mathematics
- Music
- Philosophy
- Physics
- Political Science
- Psychology
- Religion
- Russian
- Sociology
- Spanish
- Theatre
- Women's Studies
- Zoology
- Individually Designed Major

The following majors are available through the Evening University: English, Mathematics, Psychology, Sociology, Studio Art.

The Bachelor of Science degree program may be completed with an approved major in one of the following fields.

- Biology
- Chemistry
- Environmental Sciences
- Geology
- Physics
- Psychology
- Zoology

The Bachelor of Music degree program may be completed with an approved major in one of the following fields.

- Music Performance
- Music Theory

FIRST-YEAR PROGRAMS

The first year of university-level study is challenging. The College of Arts and Sciences offers students two programs that help them complete the first year successfully and acquire the skills and background necessary for success throughout their university careers.

In their first semester, students are encouraged to enroll in the Teacher-Advisor Program (TAP), which is designed to help students begin a successful liberal arts education. TAP combines interactive courses with careful academic advising. In TAP seminars, students approach significant issues from a variety of points of view, develop their critical thinking, and improve their skills in oral and written communication. Students' TAP instructors are also their academic advisors and help first-year students discover their interests and reach academic goals. TAP courses all satisfy the College's distribution requirements. Typical topics for TAP courses include "Science as a Way of Knowing," "Coming to America: Autobiography and Ethnicity," "Geology and Ecology of Lake Champlain," "Rationality: Belief in God," and "Student Movements in the Twentieth Century." More than forty different courses like these are available to first-year students each year.

As students enter their second semester, it is important for them to continue developing the critical thinking, speaking and writing skills cultivated in TAP, and also to reflect on their choices of majors and minors. Our second-semester program, STEP (Sophomore Transition and Engagement Program) is designed to facilitate the transition into the sophomore year. Courses encourage the intellectual shift from a broad exposure to the liberal arts to in-depth study in a particular field. STEP courses are available in all disciplines and are interactive, with significant writing, speaking, or other kinds of engagement that cultivates critical thinking skills.

The combination of TAP and STEP will allow you to get your university education off to a strong start.

THE JOHN DEWEY HONORS PROGRAM

The John Dewey Honors Program brings together academically committed students who seek an especially challenging and creative undergraduate experience. John Dewey Scholars participate in seminars with other honors students from across the liberal arts, take one or more honors-level courses in their majors and complete their senior year with an honors thesis or creative project. A variety of special seminars and cultural, social, and service activities round out the program. John Dewey scholars have an honors advisor to help them design the best possible schedule of courses, and are given priority enrollment for courses. The Honors Program lounge offers students a quiet space for studying and socializing.

A select group of first-time, first-year students is invited to join the program each year. In addition, students who do well during their first year at the university may apply for admission to the program at the beginning of their sophomore year. Students who successfully complete the program graduate as John Dewey Scholars and receive College Honors as well.

PREPROFESSIONAL PREPARATION

Whether you are interested in medical, dental or law school, or graduate work in other fields, the College of Arts and Sciences offers you excellent opportunities to complete your preprofessional education.

Medicine and Dentistry: Minimum requirements for entry into medical and dental schools include one year each of biology, general chemistry, organic chemistry, physics and calculus. Increasing numbers of medical and dental schools also are requiring a year of English, work in the humanities, social sciences, and languages. There is however no required or preferred major. As long as you complete the courses required by your chosen professional schools, you may pursue any undergraduate major in UVM's College of Arts and Sciences. Medical and dental schools are primarily concerned with the overall scope and quality of undergraduate work. Only about half the first-year students in medical or dental schools have majored in a science, for example. Thus, you should follow your true interests and work to achieve the academic standing necessary for. Your academic advisor will help you plan your program. In addition, the Center for Career Development coordinates pre-medical and pre-dental advising, and has information about the requirements of specific medical and dental schools.

Because the UVM College of Arts & Sciences offers the advantages of a small liberal arts college within a comprehensive university, students have the opportunity to do research with faculty who are nationally and internationally recognized leaders in their fields. We have an excellent record of placing graduates in medical and dental schools. Among the institutions where recent pre-medical graduates are now studying are Albert Einstein College of Medicine, Baylor, Boston University, Columbia, Cornell, Dartmouth, Hanaman Hospital and the Mayo Clinic, while pre-dental graduates are studying at Boston University, Columbia, NYU, Northwestern, and University of Pennsylvania.

Law: A significant number of UVM students consider attending law school immediately or a few years after graduation. UVM is successful in placing its graduates in leading law programs around the country, including at Yale University, New York University, Columbia University, and the University of Michigan.

Arts & Sciences students have the opportunity to participate in the accelerated BA/JD Program with Vermont Law School. The Program allows exceptionably qualified students to complete both a Bachelor of Arts in the College of Arts and Sciences and a Juris Doctor at Vermont Law School in six rather than seven years. For application and program information, contact the program Coordinator, Professor Howard Ball, Department of Political Science, 656-6263, or the College of Arts and Sciences, 656-3166.

The University of Vermont provides guidance to its pre-law students through the Center for Career Development and a Faculty Pre-Law Advisory Committee. We begin working with students as soon as they express an interest in law and provide guidance throughout the undergraduate career.

Unlike pre-medical programs, where students must take a prescribed set of courses, there is no pre-law curriculum. "What law schools seek in their entering students is not accomplishment in mere memorization," states the Association of American Law Schools, "but accomplishment in understanding, the capacity to think for themselves, and the ability to express their thoughts with clarity and force." The Association does not prescribe a specific course of study to prepare undergraduates for law school, but rather suggests a broad approach to liberal arts including work in English, humanities, logic, mathematics, social sciences, history, philosophy, and the natural sciences.

Graduate Study in Other Fields: In addition to medical, dental or law school, Arts and Sciences students pursue graduate education in a variety of fields ranging from ethnomusicology to journalism or immunology. Recent UVM College of Arts and Sciences graduates have been accepted at such institutions as the University of Wisconsin, Brandeis, Harvard, University of Michigan, Yale, New York University, Princeton, Cornell, Berkeley, Tufts, and Duke.

Secondary Teaching: Students in the College of Arts and Sciences who are interested in becoming eligible to teach in secondary grades (7-12) should review the College of Education and Social Services section titled Teacher Education. All requirements must be fulfilled as listed in the CESS Secondary Education State Approved program and not simply the sequence of Professional courses. The requirements are also available at http://www.uvm.edu/~cess/stservices

REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE

A. A student must earn a cumulative grade-point average of 2.0 in a program comprised of a minimum of 122 semester hours to include **two** hours of physical education activities. Students 25 years of age or older at the time of admission to the University or students with a documented medical condition which precludes participation in such activities are exempt from the physical education requirement and must present a total of 120 hours of academic credit.

   Of the 122 hours of credit required, students electing a minor offered by the College must complete 96 hours in courses offered by departments and programs in the College of Arts and Sciences. The remaining 24 hours may be taken in courses offered by any academic unit at The University of Vermont. Students electing an approved minor offered by another school or college of the University (a cross-college minor), must complete 84 hours in courses offered by the departments and programs in the College of Arts and Sciences. The remaining 36 hours of credit, to include courses required for the minor, may be taken in courses offered by any academic unit of The University of Vermont.

   No more than eight hours of Military Studies credit may apply toward the degree. Courses taken on a pass/no pass basis may not be used toward completion of any requirement listed below under sections C and D and E.

B. A student must be matriculated in the College of Arts and Sciences and in residence at The University of Vermont during the period in which he or she earns 30 of the last 45 hours of academic credit applied toward the degree.

C. A student must complete the following courses which comprise the general and distributive requirements for the Bachelor of Arts degree. All courses used to satisfy these requirements must carry at least three hours of credit and may not be taken on a pass/no pass basis.

General Requirements

1. ***Non-European Cultures:*** One course, other than a foreign language, which deals with non-European cultural traditions.[1] The course selected to satisfy this requirement may also be used to fulfill the distributive requirement, but one course cannot be used to satisfy both General Requirements 1 and 2.

2. ***Race Relations and Ethnic Diversity in the United States:*** One course which addresses centrally the question of race relations and ethnic diversity in the U.S.[2] The course selected to satisfy this requirement may also be used to fulfill the distributive requirement, but one course cannot be used to satisfy both General Requirements 1 and 2.

Distribution Requirements

Six of the seven categories must be completed. No more than two courses from the same department may be used to satisfy the distribution requirement. No single course may satisfy more than one category, except that a foreign language course which fulfills the literature category simultaneously fulfills the category of foreign language. Courses which satisfy major and minor requirements may also be used to satisfy distribution requirements.

1. ***Foreign Language:*** One course numbered 52, or in Latin, 51 and 52, or one course numbered 100 or above (except Spanish 105). A student who has achieved a score of 4 or better on an appropriate Advanced Placement Test will be exempt from this requirement.[3] Exemption will also be granted to those students who achieve a score of 650 or better on the appropriate CEEB Achievement Test and who pass oral and written tests administered by the appropriate foreign language department.
2. ***Mathematics:*** One course numbered 13, 14, 17 or above or Statistics 51 or above. A student who has achieved a score of 4 or better on the Calculus AB or a score of 3 or better on the Calculus BC Advanced Placement Tests will be exempt from this requirement.[3]
3. ***Fine Arts:*** One course in Studio Art or Art History, Music,[4] Theatre,[5] or Film.
4. ***Literature:*** One course selected from a list of approved offerings in Classics, English, French, German, World Literature, Greek, Italian, Latin, Russian, and Spanish.[6]
5. ***Humanities:*** Two courses selected from a list of approved offerings in ALANA Studies, Art History, Classics, Greek, History, Latin, Philosophy, Political Science, and Religion.[7]
6. ***Social Sciences:*** Two courses selected from a list of approved offerings in Anthropology, Communication Sciences, Economics, Geography, Area and International Studies, Political Science, Psychology, Sociology, Vermont Studies, and Women's Studies.[8]
7. ***Natural Sciences:*** Two courses, one of which must include laboratory experience, from among the offerings in Astronomy, Biology, Botany, Chemistry, Geology, Physics.

D. A student must complete an approved Major in the College of Arts and Sciences by satisfying the requirements specified by the department or program supervising the major and by maintaining a cumulative grade-point average of 2.0 in the major field. No more than 45 hours of credit in the major field may be used toward completion of the 122 hours of credit required for graduation. At least one-half of the credit hours used toward the major requirements must be taken at The University of Vermont. Of these, at least 12 credits must be at or above the 100 level. Application of credits earned elsewhere to completion of the major is subject to approval by the appropriate department chairperson or program director. No courses applied toward satisfaction of major requirements may be taken on a pass/no pass basis.

E. A student must complete a minor approved by the College of Arts and Sciences in a field other than the major by satisfying the requirements specified by the department or program supervising the minor.[9] Also, a student must maintain a cumulative grade-point average of 2.0 in the minor field.[10] Completion of a second major will satisfy the minor requirement. As with the major, at least one-half of the credit hours used toward completion of the minor requirements must be taken at The University of Vermont, and application of credits earned elsewhere toward completion of the minor is subject to approval by the appropriate department chairperson or program director. No courses applied toward satisfaction of the minor requirements may be taken on a pass/no pass basis.

REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE

A. A student must earn a cumulative grade-point average of 2.0 in a program comprised of a minimum of 122

[1]The following courses have been approved for this category for the 2002-03 academic year: Anthropology 21, 23, 24, 64, 128, 160, 161, 162, 163, 165, 166, 167, 170, 172, 175, 177, 179, 180; Art 8, 146, 185, 187, 188, 192, 285; Classics 145; English 61, 172, 173; French 289; Geography 1, 51, 56, 151, 154, 173; History 9, 10, 40, 41, 45, 46, 50, 51, 62, 63, 140, 141, 149, 150, 151, 152, 161, 163, 164, 240, 241, 250, 252; Music 15; Philosophy 3, 121, 122, 221; Political Science 157, 168, 170, 174, 175, 177, 179; Religion 20, 21, 130, 131, 132, 134, 141, 145, 230; Sociology 171, 213, 272; World Lit 145.

[2]The following courses have been approved for this category for the 2002-03 academic year: All ALANA Studies courses; Anthropology 160, 64, 169, 187, Communication Sciences 160, Economics 153, English 57, 166, 167, 168, 170, Geography 60, History 68, 168, 169, 187, 188, 189, Political Science 29, 129, Psychology 269, Religion 80, 128, Sociology 19, 31, 118, 119, 219. Art 295 "Working With Culturally Diverse Sources" and Art 295 "Cultural Transformations" will meet this requirement. Anthropology 187 is cross-listed with Sociology 119, WLIT 16, 116.

[3]See Admissions Section for information concerning academic credit for Advanced Placement Testing.

[4]Music Performance courses (one and two credit hours each) may be used to satisfy the Fine Arts requirement if their cumulative credit hour total is equal to or greater than three.

[5]Speech courses will not satisfy the Fine Arts requirement.

[6]The following courses have been approved for this category for the 2002-03 academic year: Classics 37, 42, 153, 155, 156; all English courses except: 1,4, 30, 50, 53, 101, 102, 103, 104, 108, 109, 111, 112, 117, 118, 119, 120; all French courses numbered 111 or above except 191, 201, 209, 211, 215, 216, 292, 293; all World Literature courses; all German courses numbered above 100 except: 103, 104, 121, 122, 201, 202, 213; all Greek courses numbered above 200; Italian 157, 158; all Latin courses numbered above 100 except 111, 112, 255; all Russian courses numbered above 100 except: 101, 121, 122, 141, 142, 161, 221, 222, 251, 271; all Spanish courses numbered 140 or above except: 201, 202, 210, 211, 290, 291, 292, 293, 294, 299.

[7]The following courses have been approved for this category for the 2002-03 academic year: all Art History, History, Philosophy, Religion courses; ALANA Studies 55, 159; Classics 21, 23, 24, 35, 121, 122, 149, 154, 157, 158, 159, 221, 222; Greek 203, 205; Latin 255; Political Science 41, 141, 142, 143, 144, 146, 241, 242, 243, 249.

[8]The following courses have been approved for this category for the 2002-03 academic year: all Anthropology, Economics, Geography, Psychology, and Sociology courses; Communication Sciences 20, 80, 94; Area and International Studies 91A, 91B; all Political Science courses except: 41, 141, 142, 143, 144, 146, 241, 242, 243, 249; Vermont Studies 52, Women's Studies 73.

[9]Only one course may be applied toward completion of both a major and a minor requirement.

[10]The minor grade-point average will be calculated from the first set of courses which satisfy the minor requirements. However, if a student's grade-point average in these courses falls below 2.0, and there are additional courses which are approved for inclusion in the minor, a student may elect to drop for purposes of the grade-point average calculation, one course graded below C and to replace this course with an approved alternate.

semester hours to include **two** hours of physical education activities. Students 25 years of age or older at the time of admission or students with a documented medical condition which precludes participation in such activities are exempt from the physical education requirement and must present a total of 120 hours of academic credit. Of the 122 hours hours of credit required, 96 hours must be taken in courses offered by departments and programs in the College of Arts and Sciences. The remaining 24 hours of credit may be taken in courses offered by any academic unit of The University of Vermont, although no more than eight credits of Military Studies may apply toward the degree. Courses taken on a pass/no pass basis may **not** be used toward the completion of any requirement listed below under sections C and D and E.

B. A student must be matriculated in the College of Arts and Sciences and in residence at UVM during the period in which he or she earns 30 of the last 45 hours of academic credit applied toward the degree.

C. A student must complete the General Requirement Race Relations and Ethnicity in the United States approved by the College. A student must complete the **Distributive Requirement** for the Bachelor of Science degree by completing six courses selected from at least two of the following areas: Foreign Language, Fine Arts, Literature, Humanities, and Social Sciences. Students opting for a Bachelor of Science degree in Psychology must also complete the College of Arts and Sciences distribution requirements for a Bachelor of Science degree and they may not use Psychology courses to fulfill the social sciences category. No courses applied toward satisfaction of the distributive requirements may be taken on a pass/no pass basis.

D. A student must complete an approved **Major** in the College of Arts and Sciences by satisfying the requirements specified by the department or program supervising the major, and by maintaining a cumulative grade-point average of 2.0 in the major field. No more than 50 hours of credit in the major field may be used toward completion of the 122 hours of credit required for graduation. At least one-half of the credit hours used toward the major requirements must be taken at UVM. Of these at least 12 credits must be at or above the 100 level. Application of credits earned elsewhere toward completion of the major is subject to approval by the appropriate department chairperson or program director. No courses applied toward satisfaction of major requirements may be taken on a pass/no pass basis.

Bachelor of Science (with optional minor) degree. A student electing this degree program must satisfy all of the requirements specified in sections A, B, C, and D (above), as well as:

E. A student must complete an approved minor in a field other than the major by satisfying the requirements specified by the department or program supervising the minor and by maintaining a cumulative grade-point average of 2.0 in the minor field. Students electing a minor offered by the College must complete 96 hours in courses offered by departments and programs in the College of Arts and Sciences. The remaining 24 hours may be taken in courses offered by any academic unit at The University of Vermont. Students electing an approved minor offered by another school or college of the University (a cross-college minor) must complete 84 hours in courses offered by the departments and programs in the College of Arts and Sciences. The remaining 36 hours of credit, to include courses required for the minor, may be taken in courses offered by any academic unit of The University of Vermont. At least one-half of the credit hours used toward completion of the minor requirements must be taken at The University of Vermont, and application of credits earned elsewhere toward completion of the minor is subject to approval by the appropriate department chairperson or program director. No courses applied toward satisfaction of the minor requirements may be taken on a pass/no pass basis. No more than two of the courses from section C distribution requirements may be applied toward the completion of the minor requirements.

REQUIREMENTS FOR THE BACHELOR OF MUSIC DEGREE

A. A student must earn a cumulative grade-point average of 2.0 in a program consisting of a minimum of 122 semester hours of academic credit for a Music Theory Concentration, or 125 semester hours of academic credit for Music Performance Concentration. Of these hours of required credit, **two** hours must be associated with physical education activities. Students 25 years of age or older at the time of admission or students with a documented medical condition which precludes participation in such activities are exempt from the physical education requirement and must present a total of 120 hours of academic credit. Courses taken on a pass/no pass basis may not be used toward the completion of any requirement listed below under sections C, D, and E.

B. A student must be matriculated in the College of Arts and Sciences and in residence at UVM during the period in which he or she earns 30 of the last 45 hours of academic credit applied toward the degree.

C. A student must complete the **Distributive** and **General Requirements** identical to that required for the Bachelor of Arts degree.

D. A student must complete a **Major** with a concentration in either theory or performance by satisfying the requirements specified by the department, and by maintaining a cumulative grade-point average of 2.0 in the major field. An admission audition, junior standing jury examination, and senior recital are also required for the performance concentration. At least one-half of the credit hours used toward the major requirements must be taken at The University of Vermont. Of these, at least 12 credits must be at or above the 100 level. Application of credits earned elsewhere to completion of the major is subject to approval by the appropriate department chairperson or program director. No courses applied toward satisfaction of major requirements may be taken on a pass/no pass basis.

Bachelor of Music (with optional minor) degree. A student electing this degree program must satisfy all of the requirements specified in sections A, B, C, and D (above) as well as:

E. A student must complete an approved minor in a field other than the major by satisfying the requirements specified by the department or program supervising the minor and by maintaining a cumulative grade-point average of 2.0 in the minor field. Students electing a minor offered by the College must complete 96 hours in courses offered by departments

and programs in the College of Arts and Sciences. The remaining 24 hours may be taken in courses offered by any academic unit at The University of Vermont. Students electing an approved minor offered by another school or college of the University (a cross-college minor) must complete 84 hours in courses offered by the departments and programs in the College of Arts and Sciences. The remaining 36 hours of credit, to include courses required for the minor, may be taken in courses offered by any academic unit of The University of Vermont. At least one-half of the credit hours used toward completion of the minor requirements must be taken at The University of Vermont, and application of credits earned elsewhere toward completion of the minor is subject to approval by the appropriate department chairperson or program director. No courses applied toward satisfaction of the minor requirements may be taken on a pass/no pass basis.

INTERNSHIPS

Arts and Sciences students are encouraged to do internships and may count up to 12 hours of internship credit towards their B.A. or B.S. Full information on internships and the regulations governing them is found in the Arts and Sciences Internship brochure, available in 304 Waterman.

REGULATIONS GOVERNING INDEPENDENT STUDY

A student may receive credit for a project or program of independent study which is supervised by an academic department or program within the University. Such independent study projects may be carried out under registration in courses entitled Readings and Research or Internship. All such projects must conform to University guidelines for independent study. There is no limit on the number of independent study credits which may be earned, but prior approval by the Committee on Honors and Individual Studies is required if a student wishes to elect nine or more such credits in a single semester.

REGULATIONS GOVERNING COLLEGE HONORS

A. The **College Honors** program, designed for the superior student with unusual initiative and intellectual curiosity, provides an opportunity for the pursuit of a two-semester, six-credit (3-3) independent research, scholarly, or creative project under the direction of a faculty sponsor. A student in the College of Arts and Sciences may apply for College Honors in a particular subject if, at the end of the junior year, he or she has a grade-point average of at least 3.20 and has been on the Dean's List for three semesters. The program must have been approved by the sponsoring department and by the Committee on Honors and Individual Studies. All application materials must be turned in to the Committee by September 30 of the candidate's senior year. Students must present a satisfactory written report and pass an oral examination upon completion of the honors project. Students who wish to consider undertaking a College Honors project during the junior year should contact the Office of the Dean for information concerning the circumstances in which such an exceptional arrangement is possible. College Honors credit will be counted toward the 45-hour limit (50-hour limit for B.S. candidates) in the major.

B. Some departments in the College, including Economics, English, History, Mathematics, Political Science, Religion, and Sociology, sponsor **Departmental Honors** programs. Participation in these programs is limited to those students who are specifically recommended by their department. Each department will define what is required to earn Departmental Honors. A student who successfully completes this program is granted a degree with Departmental Honors. These programs are administered directly by the sponsoring department and information concerning them may be obtained from faculty advisors.

C. Students may also earn College Honors through the **John Dewey Honors Program,** a three-year course of study. Ground work for the senior honors thesis is laid with John Dewey Honors seminars in the sophomore and junior years. In their senior year, John Dewey Scholars complete College Honors as described in Section A above. Application is restricted to students with a G.P.A. of 3.2 or higher, and must be made during the second semester of the first year. For further information, contact the College.

REGULATIONS GOVERNING STUDY ABROAD

Students should refer to the general University regulations and procedures pertaining to Study Abroad. For Arts and Sciences students the following additional policies pertain to the application of credit earned in a Study Abroad program:

A. Regardless of the number of credits accepted in transfer by the University, a maximum of 16 credits earned in a one-semester Study Abroad program will be applied toward satisfaction of degree requirements. For year-long programs, a maximum of 32 credits will be applied toward the degree.

B. Students must complete 30 of the last 45 hours of degree credit in residence at UVM. One-half of the hours applied toward the satisfaction of major requirements, including 12 hours at the 100 level or above, must be completed at The University of Vermont. One-half of the hours applied toward the satisfaction of minor requirements must be completed at The University of Vermont.

C. Under no circumstances will a student in the College of Arts and Sciences be permitted to enroll in a University-sanctioned Study Abroad program while on trial.

REGULATIONS GOVERNING TRANSFER INTO THE COLLEGE

A student who wishes to transfer into the College of Arts and Sciences from another college or school at the University must comply with the Intercollege Transfer policy in the section on Academic and General Information. Applications for internal transfer may be submitted to the Office of the Dean at any time, and they will be reviewed on a continuous basis.

REGULATIONS GOVERNING ACADEMIC STANDARDS

The following criteria for academic trial and dismissal, while making allowances for the student in the first semester, are designed to encourage academic work of quality at least equal to the minimum which is required for graduation.

Trial

A. A student who earns a semester grade-point average higher than that which merits dismissal but below 2.00 is placed *on trial*. In order to avoid dismissal from the University, a student who has been placed on trial must in the following semester earn a 2.00 semester average, enroll in all courses for a letter grade, and maintain a program of 12 or more credit hours. No student will be removed from trial until both the semester and cumulative averages are at least 2.00. A student who is on trial may not enroll in a University-sanctioned study abroad program.

B. First-Year Students. Following the first semester of enrollment, a student who earns a semester grade-point average higher than that which merits dismissal, but below 1.67, is placed on trial and must in the following semester satisfy the same probationary requirements as described above. All first-year students who have a cumulative grade-point average which is below 2.00 after completion of the second semester will be placed on trial.

Dismissal

C. A student who does not satisfy the conditions of trial, or who earns a semester grade-point average of 1.00 or lower, or who earns failing grades in one-half of the semester credit hours attempted (excluding courses in physical education and military studies) will be *dismissed for low scholarship*. The period of dismissal is one year. Dismissed students must receive written approval from the Arts and Sciences Dean's Office before enrolling in any University course.

Readmission Following Dismissal

D. A dismissed student who presents evidence of his/her ability to perform satisfactorily may be considered for readmission on trial. A student who has been dismissed for a second time will not be considered for readmission on trial until at least three years have elapsed. Further information regarding readmission may be obtained from the Office of the Dean.

MAJORS: DEPARTMENT REQUIREMENTS

Bachelor of Arts, Bachelor of Science, and Bachelor of Music requirements are found under the appropriate department headings.

INDIVIDUAL DESIGN MAJOR The IDM is a nondepartmental, interdisciplinary major for those Bachelor of Arts candidates whose academic interests are not met by the major programs currently offered by the College. An IDM may not be a program of narrow professional training. Rather, it must lead to an intensive investigation of some broad area of human knowledge which is not covered by a single departmental discipline. During the senior year, IDM majors engage in a three-credit tutorial for which they complete a paper or an equivalent project which demonstrates the essential coherence of the major. A College Honors project (six credits) may be substituted for the tutorial requirement. Application to pursue an IDM should be approved by the Committee on Honors and Individual Studies before the end of the candidate's junior year. No more than 18 hours of the proposed major may be completed at the time of application. Additional information about the IDM program is available in the Office of the Dean.

ANTHROPOLOGY Thirty hours in Anthropology including 21, 24, 26, and 128; 225 or 228 (recommended for the junior year) and five additional courses of which three should be at the 100 level and at least one at the 200 level.

AREA AND INTERNATIONAL STUDIES PROGRAM Entering students are invited to consider the option of concentrating in Area and International Studies. Courses in several academic disciplines can be combined so as to focus on a particular area of the world, thus providing an opportunity to test generalizations against the particular reality of a geographical area and its people.

Undergraduates who major in Area and International Studies usually accumulate sufficient credit to enable them also to fulfill department requirements in one of the social sciences, humanities, or foreign languages.

Major programs are available in the following five areas: Asia, Canada, Latin America, Russia/East Europe, Europe (Western, Northern, Mediterranean). Minor programs are also available in these areas, as well as in Africa and the Middle East.

The approach to undergraduate education combines exposure to the traditional disciplines with integrative knowledge and appreciation of a foreign culture and thus combines the broad liberal arts education with a more specific area competence.

During their first and sophomore years, students who plan to major in Area and International Studies should take the required foreign language courses as well as beginning courses in the humanities and social sciences which are prerequisites for subsequent required courses and also meet the general distribution requirements.

Students interested in concentrating in Area and International Studies are urged to contact the Director.

Specific requirements of the individual programs follow:

Asian Studies

In selecting courses from the Asian Studies listing, students must consult with an appropriate Asian Studies advisor and demonstrate in their choices thematic and/or geographic coherence.

The Asian Studies major consists of at least 33 credit hours in courses from the Asian Studies listing (see Courses of Instruction; Asian Studies) to include the following:

A. Completion of two years' (normally 16 hours) study of a language of the geographic subarea of concentration. No more than 16 hours of language study may be counted toward the major. For students who have demonstrated fluency in the language of the subarea of concentration (for instance, native speakers of the language), the language requirement will be waived. Such students will still be required to complete the 33-credit hour requirement.
B. The remaining credit hours must include at least nine hours at the 100 level and three hours at the 200 level. These hours must be selected from at least three academic disciplines. Language courses may not be used to fulfill this requirement.

Note: Courses significantly but not entirely on Asia may be counted toward a student's major requirements only if papers or projects relevant to their Asian subarea or their Asian thematic focus have been completed. The Dean's Office must receive written approval from the advisor in order for these courses to be counted toward the major.

Students who major in Asian Studies and minor in an Asian language may overlap only one course as stipulated in the section on Distribution Requirements.

Canadian Studies

The Canadian Studies major requires at least 30 credit hours to consist of the following:

A. Three required courses: Area and International Studies 91, Introduction to Canada; History 66, Canadian History: 1867 to the Present; Area and International Studies 296, Seminar on Modern Canada.

B. Seven additional courses, of which at least six must be at the 100 level or above, and of which at least five must be chosen from the following 100 percent Canadian content list: AIS 195, 196, 295; Anthropology 167; Art 180, 282 (when topic is Canadian); Bus. Admin. 234; English 157, 158; French 293, 285; Geography 52, 210; Geology 272, 273 (when this field course goes to Canada); History 65, 265, 165; Pol. Sci. 173.

C. Majors will study French language through the intermediate level (French 52) or higher.

Majors are strongly encouraged to acquire an intermediate/advanced proficiency by completing at least French 201. Majors pursuing intermediate/advanced proficiency should consult with the Canadian Studies faculty of the Romance Languages Department to determine an appropriate plan of study.

Latin American Studies

A. Twelve hours selected from the following five courses: Anthropology 161; History 62, 63; Geography 56; Political Science 174.

Two additional semester courses selected from Area and International Studies, 193, 194, 195, 196, 197, 198; History 161, 163, 164, 262; or from courses recommended by the Program of Latin American Studies.

B. Plus six hours of advanced Spanish (Spanish 142, 279, 281, 286, 287, 293, 294).

C. An additional 12 hours from related courses chosen in consultation with advisor.

Russian/East European Studies

A. 30 hours of required courses to include the following: Two courses from HIST 27, 137, 138; ECON 116; POLS 172; WLIT 118; two courses at the 100 level or above in Russian; three additional courses in the major, chosen in consultation with an advisor in the major.

B. Recommended courses: Area and Int'l Studies 91.

The program also offers an interdisciplinary Individual Design Major in Russian/East European Studies and Business. The program of study must be planned with a member of the Russian/East European Studies faculty.

Required courses (35 hours):
Two courses in Russian at the intermediate level; four courses in Economics including 116; one Russian/East European Area Studies course other than those in Economics; two courses in Business Administration; two approved electives at the 100 level or above.

European Studies (Northern, Western, Mediterranean)

A total of 33 hours in approved European Studies courses to include nine hours at the 200 level. No more than 12 hours may be taken from any one discipline. Only 15 hours of transfer credit may be applied toward the major. Students must consult closely with their European Studies advisor in the development of a coherent program of courses.

A. *European Studies seminar:* Senior research project: All seniors must complete a research project for at least three credits on a subject focused on northern, western, or Mediterranean Europe and approved by the European Studies subcommittee. This requirement can be fulfilled by International Studies 291 (European Studies Seminar); International Studies 234 and 235 (Honors/International Studies); International Studies 297 or 298 (Advanced Readings and Research). Students should expect to use their competency in a European language (other than English) in this research project where relevant. Upon request, the European Studies subcommittee may approve a research project done in conjunction with a 200-level seminar offered by one of the college's departments.

B. *European culture and thought:* Twelve hours from the approved list to include six hours at the 100 level or above.

Art: 5, 6, 148, 149, 155, 158, 161, 164, 165, 170, 172, 174, 177, and 179 or 282 (when the content is European); **Classics:** 24, 33, 35, 37, 42, 153–159; **English:** 21, 22, 25–28, 85, 86, 102, 103, 121, 122, 124, 125, 127, 128, 129, 130, 133, 134, 141, 142, 146, 152, 153, 154, 221, 222, 241, 242; **Film:** 5, 6, 107, 161; **French:** 111, 112, 225, 226, 235, 245, 246, 247, 255, 256, 265, 266, 275, 276, 290, 291, 292; **German:** 104, 121, 122, 155, 156, 201, 213, 214, 225, 226, 237, 238, 247, 248, 251, 252, 263, 264, 271, 273, 275, 276, 278, 279, 281, 282; **Greek:** all courses above 100 level; **Italian:** 121, 122, 157, 158; **Latin:** all courses above 100 level; **Music:** 11, 12, 111–114; **Philosophy:** 101, 102, 105, 107, 133, 140, 151, 160, 260; **Political Science:** 141, 142, 146; **Religion:** 22, 111, 116, 122, 124, 173, 224, 226, 228, 280; **Spanish:** 141, 235, 236, 237, 245, 246, 265, 276, 277, 291, 292; **Theatre:** 136, 137, 138, **World Literature** 11, 14, 17, 18, 24, 35, 87, 95, 96, 111, 114, 117, 118, 122, 153-156.

C. *European history and society:* Twelve hours from the approved list to include six hours at the 100 level or above.

BSAD: 236; **Economics:** 113; **Geography:** 55, 155; **History:** 13, 14, 19, 21–27, 85, 86, 120–136, 139, 185, 186, 190, 191, 221, 222, 224–228, 285; **Political Science:** 171, 257, 276, 287.

D. *European language:* Six hours of a European language other than English at or above the 100 level. Students who fulfill nine or more hours of their "Culture and Thought" requirement through the study of any one such language must fulfill this requirement in a second European language other than English.

Note: Other equivalent courses within each area may be accepted with permission of the Director of European Studies.

ART Students may major in one of the following:

Studio Art: Thirty hours in Studio Art, including nine hours in foundation courses (to include Art 3 and two from 1, 2, 4) with three different instructors; 15 hours at the 100 level (only three of which may be 197; six of which may be 195) with two different instructors, including courses in the areas of two-dimensional study (drawing, painting, printmaking, photography, film, and video) and

of three-dimensional study (sculpture, ceramics, fine metals); and six hours at the 200 level, three of them in the senior year; nine hours of Art History, including two of the following: 5, 6, or 8; and one of the following: 140, 170, 172, 174, 177, 179, 180, and 199 when approved for this requirement (permission depends upon topic; check with Art Department).

Note: A Studio Art major may not take more than one Evening Division course per semester in Studio Art.

Art History: Thirty hours in Art History, including six hours from 5, 6 and 8; 12 hours to include three hours from each of four different categories (196 courses in these categories also qualify): Ancient and Medieval (146, 148, 149, 155), Early Modern European (158, 161, 164, 165), Modern, American, and Canadian (170, 172, 174, 177, 180), Asian (185, 187, 188, 192), Other Non-Western Traditions, New Approaches to Art History, and Contemporary Art (140, 179, 189, 199); 12 additional Art History hours, to include at least one course (three hours) numbered 282 or above to be taken during the junior or senior year, preferably during the senior year. Six hours of Studio Art; the study of a foreign language through 51–52. French or German is strongly recommended for students considering eventual graduate work in Art History.

For Art Education, see College of Education and Social Services.

BIOLOGY Students may select either of two degree programs:

Bachelor of Arts: Chemistry 31, 32 or 35, 36 to be taken the first year if possible; 141, 142; Physics 11 or 31 in combination with 21 (and Physics 12 or 42 in combination with 22 recommended); Math. 19, 20; or 21, 22. Thirty-two hours of biology including introductory biology (Biology 11, 12 or 1B, 2B is preferred, but 1A, 2A is accepted),101, 102, 103, 104 and three additional courses (including at least one course with laboratory) in one of several concentrations. One course may be taken from outside the Department from approved offerings of the biologically-oriented departments. A list of courses in each concentration is provided below. For a list of approved offerings in other departments, consult the Biology Department Office. College honors will not count toward the major. **NOTE: Most professional schools (e.g. medicine, dentistry, veterinary, physical therapy) require the equivalent of Physics 12 or 42 in combination with 22.**

Bachelor of Science: Chemistry 31, 32 or 35, 36 to be taken the first year if possible; Chemistry 141, 142; Physics 21, 22 in combination with 11, 12, or preferably 31, 42; Math. 19, 20 or 21, 22. Statistics 141 or 211. Forty-six hours of biology including introductory biology (Biology 11, 12 or 1B, 2B is preferred, but 1A, 2A is accepted), 101, 102, 103, and 104. Of the remaining 23 hours in 200-level courses, no more than 11 hours may be taken outside the Department. Up to six hours of Biochemistry 301, 302 and/or up to six hours for Biology 197, 198 or Honors 208, 209 will be accepted as credit toward the 23 hours in 200-level courses. A list of the courses in the several concentrations is provided below. For a list of approved offerings in other biologically-oriented departments, consult the Biology Department Office.

Environmental Biology: This concentration is appropriate for students with interests in Ecology, Evolution, Conservation Biology, or Animal Behavior. Biology 102 is required of all Biology majors. Other recommended courses in this concentration include, but are not restricted to: Biology 203, 206, 208, 217, 238, 246, 254, 255, 264, 270, 295.

Professional Biology: Students with interest in the medical, veterinary, dental, and allied health fields may choose from the following courses: Biology 205, 212, 217, 219, 223, 246, 254, 265, 295, and Honors 208, 209. In addition, students may take approved courses offered by other biologically-oriented departments.

Cell and Molecular Biology: This concentration serves students with interests in Cell, Molecular, and Developmental Biology. Students may choose from: Biology 205, 212, 223, 231, 263, 265, 267, and Honors 208, 209. In addition, students may take approved courses offered by other biologically-oriented departments.

General Biology: This concentration serves students who wish a very broad training in life science, including zoology. After consultation with their Biology Department faculty advisor, students take a variety of courses drawn from the approximately three dozen offered by the Biology Department or from other approved courses in life science. See the Biology Department for a listing.

Neurobiology: This concentration focuses on molecular and cellular aspects of the nervous system. Funding from the Howard Hughes Medical Institute allows students to take courses offered by faculty of three departments. Three courses are required, Biology 261 and 295 (Neurobiology Lecture and Neurobiology Laboratory) and PSYC 221 (Physiological Psychology). Students may also take ANNB 202, PSYC 121, 220, 223, PHRM 290 as well as other advanced courses in cell and molecular biology.

BOTANY Math. 21, 22; or Math. 21 and Statistics 141 or 211; or Math. 19, 20 and Statistics 141 or 211; Physics 21, 22; and 11, 12 or preferably 31, 42; Chemistry 42 or preferably 141, 142; Biology 1, 2; Biology 101 or 132, 104, 107, 108, and 109 or 160; two additional semester courses in Botany, at least one at the 200 level. Six credits of modern foreign language are strongly recommended. Students may petition the department to substitute other courses for certain requirements in the planning of individual programs.

CHEMISTRY Students may select either of two degree programs:

Bachelor of Arts: Students choose to concentrate in one of three areas: General, Biomolecular, or Environmental Chemistry. All three are acceptable degrees for continuation to a variety of advanced degree programs in Chemistry or other sciences as well as Medicine, Veterinary Science, Law, or Business.

General Concentration: Chemistry 35, 36 (or 31, 32; or 31, 36), 121, 131, 143, 144 (or 141, 142; or 141, 144), 146, 161, 162, 167, 201, 202, 221, 282; Math. 21, 22; Physics 21, 22, 31, 42.

Biomolecular Concentration: Chemistry 35, 36 (or 31, 32; or 31, 36), 121, 131, 143, 144 (or 141, 142; or 141, 144), 162, 167, 201, 204, 282; Math. 21, 22; Physics 21, 22, 31, 42; Biology 1, 2 (or 11, 12), 103; and one of the following: Biochemistry 212, 320, 321 or Pharmacology 328.

Environmental Concentration: Chemistry 35, 36 (or 31, 32; or 31, 36), 121, 131, 143, 144 (or 141, 142; or 141, 144), 161 or 162, 167, 201, 221, 282; Math. 21, 22; Physics 21, 22, 31, 42; and two courses from the following, at least one of which must be Civil and Environmental Engineering 252 or 253: Civil and Environmental Engineering 150, 252, 253, Geology 233, 234, 235, or 255.

Bachelor of Science: Students pursuing a Bachelor of Science degree in Chemistry complete an extensive set of courses including research and biochemistry, providing them with a degree which is certified by the American Chemical Society. The B.S. degree is particularly good preparation for graduate school in Chemistry.

Chemistry 35, 36 (or 31, 32; or 31, 36), 121, 131, 143, 144 (or 141, 142; or 141, 144), 146, 161, 162, 167, 201, 202, 204, 221, 282; six hours of advanced chemistry-related course work, which must include 3 hours of Chemistry 291 or equivalent; Math. 21, 22; Physics 21, 22, 31, 42.

CLASSICS Student may major in:

Latin: Thirty hours in courses above 100, among which 111, 112, and Classics 122 are required and one course in literature in translation above 100 and one course in Greek above 100 are applicable; a second foreign language, at least through the intermediate level, is recommended.

Greek: Thirty hours in courses above 50, among which 111, 112, and Classics 121 are required and one course in literature in translation above 100 and one course in Latin above 100 are applicable; a second foreign language, at least through the intermediate level, is recommended.

Classical Civilization: 36 hours consisting of 30 in the Major Discipline and 6 in Related Courses. Of these 36 hours, 12 must be at the 100-level or above. Major Discipline. All courses in Classics, Latin, Greek, Ancient History, and Ancient Art are applicable, of which 1 course in Ancient Art (Art 146, 148, or 149) and any 2 courses in Ancient History (Classics 21, 23, 121, 122, 149, 221, 222) are required. Related Courses: For a list of approved related courses in Fine Arts, Humanities, Social Sciences and Natural Sciences, students should consult with the Classics department. Foreign Language: Fulfillment of the language distribution requirement of the College of Arts and Sciences is required, preferably with Latin or Greek.

COMMUNICATION SCIENCES 80, 90, 94, 101, 105, 160 or 162, 164, 208 or 215, 262, 271, 272; Biology 4; Psychology 161; Statistics 111 or 141 and six hours from the following: Anthropology 128, 178; English 104; Philosophy 110; Sociology 120, 141, 229; Psychology 207.

COMPUTER SCIENCE Students may select among three degree programs in Computer Science: the Bachelor of Arts degree, described below, is offered through the College of Arts and Sciences. Additionally, a Bachelor of Science is offered through the College of Engineering and Mathematics, with majors in either Computer Science or in Computer Science and Information Systems (students interested in the Bachelor of Science degree are referred to the descriptions under the College of Engineering and Mathematics).

Bachelor of Arts: Computer Science 21, 26, 100, 101, 103, 104, 224 or 243, 292, and three additional computer science courses at the 200-level or above, for at least nine additional credits, not more than three credits of which may be independent study; Mathematics 19+20 or 21+22 (Math. 21+22 are recommended), 54; Statistics 151; the distribution requirement in natural science must be satisfied, and it is recommended that this requirement be fulfilled with a two-semester laboratory science sequence.

ECONOMICS Thirty-three hours in Economics and three hours in Mathematics as follows: Economics 11, 12; Math. 19; three courses numbered Economics 60-160 or 194-196, two of which must be numbered 110 or higher; the methods and theory courses in Economics numbered 170, 171, 172; and three Economics courses numbered 210 or higher. No more than three credits from Economics 297, 298 (Readings and Research) may be applied towards the major. Students are urged to take Math. 19 early in the program.

ENGLISH Thirty-three hours at the level of 11 or above, including 86 (85 is recommended for first-year students planning to major in English); at least twenty-one hours at or above the 100 level, at least three of which must be from courses numbered 201-282 (Senior Seminars). A total of nine hours of Film may be counted toward the major. Of the credit hours above 100: (a) at least three hours must be in writing or in critical theory or in study of the English language (listed in Departmental offerings as Category A; usually courses numbered 101-120 and 201-212, but courses with other numbers may also fulfill Category A; check Departmental offerings for each term); (b) at least six hours must be in literature before 1800 (listed in Departmental offerings as Category B; usually courses numbered 121-134 and 221-222, but courses with other numbers may also fulfill Category B; check Departmental offerings for each term); and (c) at least three hours must be in 19th-century literature (listed in Departmental offerings as Category C; usually courses numbered 141-147 and 241-242, but courses with other numbers may also fulfill Category C; check Departmental offerings for each term). One Humanities course approved by the English Department or one World Literature course may count toward the major. No more than nine hours of English 117, 118, 119 and/or 120 will count toward the fulfillment of major requirements.

ENVIRONMENTAL SCIENCES Introductory biology (Biology 11, 12 or 1B, 2B is preferred, but 1A, 2A is accepted); Chemistry 31, 32 (or 35, 36); Math. 19, 20 (or 21); Chemistry 42*, 141, or 143; Environmental Studies 1 or 2; one course among the list of technology-based courses (Statistics 141 or 211; Chemistry 121 or 221; Biology 205 or 267; Geology 255; Civil and Environmental Engineering 150); 12–15 credits in a broad selection or in a concentration chosen with co-advisors to include at least one semester of research or honors. Concentrations include ***Environmental Biology, Environmental Geology, Environmental Chemistry.***

*Chemistry 42 is not allowed for either the Chemistry or Biology concentration.

ENVIRONMENTAL STUDIES Thirty-eight hours including Environmental Studies 1, 2, 151, 201, and six hours of 202 and/or 203; plus an Individually-Designed Program containing 18 hours of approved environmentally-related courses at 100 or higher level, including three hours at the 200 level, six hours of Environmental Studies courses, with at least one course in each of these areas* — natural sciences, humanities, social sciences, and international studies (may be fulfilled by study abroad experience). The courses of the Individually-Designed Program combine, along with the senior project and thesis, to provide a coherent major for the student.

*Students are cautioned that courses approved in these areas by Environmental Studies might not fulfill the distribution requirements in the College of Arts and Sciences.

FRENCH Thirty-three credits in French numbered 100 or above of which fifteen credits must be at the 200-level. Required courses: French 101 and French 111 or 112. Literature requirement: twelve credits (including 111 or 112). Culture requirements: three credits (104, 105 or 292).

Note: Only three credits of Readings and Research (197, 198) and Advanced Readings and Research (297, 298) may be counted toward the major.

GEOGRAPHY Ten courses (thirty hours), which must include: 2 or 43; 60 or 73; 81; any one regional course (from 51, 52, 55, 56, 57, 90, 92, 151, 154, 155, 162, 190 or 192); any three courses at the 100-level; any one course at the 200-level.

GEOLOGY Students may select either of two degree programs: the Bachelor of Arts and the Bachelor of Science. Within each degree program, students may select the Solid Earth or Environmental Geology concentration. Upper level elective courses within the Geology Department are divided into three categories: Solid Earth, Surface Processes, and Geochemistry/Earth systems. Students

must fulfill distribution requirements within these categories as indicated below.

Solid earth: 112, 131, 230, 240, 241, 245, 273, 195, 196
Surface Processes: 151, 153, 155, 255, 195, 196
Geochemistry/Earth Systems: 210, 233, 234, 235, 195, 196

Bachelor of Arts:

Solid Earth Concentration: One Geology course below 100 level, 101, 102, 260. At least three credits of field experience are highly advisable (Geology 197, 198, 201, field camp or field-based thesis). Three Solid Earth courses, one Surface Process course, one Geochemistry/Earth Systems course. Two courses in Geology or approved science, mathematics, engineering, or statistics courses at the 100 level or above selected in consultation with Geology advisor, Math. 19, 20, or 21, 22; Chemistry 31 and 32 (or 35 and 36); Physics 11, 21 (12, 22 also strongly recommended).

Environmental Geology Concentration: One Geology course below 100 level, 101, 102, 260. At least three credits of field experience are highly advisable (Geology 197, 198, 201, field camp or field-based thesis). Three Surface Process courses, one Solid Earth course, one Geochemistry/Earth Systems course. Two courses in Geology or approved science, mathematics, engineering, or statistics courses at the 100 level or above selected in consultation with Geology advisor, Math. 19, 20, or 21, 22; Chemistry 31 and 32 (or 35 and 36); Physics 11, 21 (12, 22 also strongly recommended).

Bachelor of Science:

Solid Earth Concentration: One Geology course below 100 level, 101, 102, 260. At least three credits of field experience are required (Geology 197, 198, 201, field camp or field-based thesis). Four Solid Earth courses, two Surface Process courses, one Geochemistry/Earth Systems course. Two additonal courses in Geology or approved science, mathematics, engineering, or statistics courses at the 100 level or above selected in consultation with Geology advisor, Math. 21, 22 or 19, 20, 22; Chemistry 31 and 32 (or 35 and 36); Physics 21, 31 and 22, 42 or 21, 31 and 125; Statistics 141.

Environmental Geology Concentration: One Geology course below 100 level, 101, 102, 260. At least three credits of field experience are required (Geology 197, 198, 201, field camp or field-based thesis). Four Surface Process courses, two Solid Earth course, one Geochemistry/Earth Systems course. Two additional courses in Geology or approved science, mathematics, engineering, or statistics courses at the 100 level or above selected in consultation with Geology advisor, Math. 21, 22 or 19, 20, 22; Chemistry 31 and 32 (or 35 and 36); Physics 21, 31 and 22, 42 or 21, 31 and 125; Statistics 141.

GERMAN Thirty hours of German courses at the 100 level or above, including 155, 156; 281 or 282; two courses of world literature or English; and two courses of European or German history.

HISTORY Thirty-three hours including six hours of any approved sequence of courses at the introductory level (00), nine hours at the intermediate level (100), and three hours at the advanced level (200). They must also include 15 hours of concentration in one of the Department's three areas of study (Western Hemisphere; Europe; Africa/Asia/Latin America) and six hours in each of the others. The 15-hour concentration must include one course at the intermediate level and one seminar at the advanced level. (The Western Hemisphere concentration must include three hours in Canadian or Latin American history.)

MATHEMATICS Mathematics majors may choose from three concentrations. Students interested in any of these three concentrations should consult an advisor in the Mathematics and Statistics Department. A Handbook for Majors is available from the department office.

Mathematics: Math. 21, 22, 121 and 52, 124, plus 18 additional credits in Math./Statistics courses at 100 level or above, with at least 12 hours numbered 200 or higher.

Statistics: Computer Science 21. Thirty-three hours of Mathematics/Statistics courses numbered 21 or higher, including Math. 121 and 124, and Statistics 141, 143 or 211, 151 or 251, 201, 221 or 227, 241 or 261, and 281 or 293. At least 12 hours must be at the 200 level or higher.

Applied and Interdisciplinary Mathematics: This concentration combines a major in applied mathematics with an approved minor that emphasizes the application of mathematics. Such minors include various disciplines in the physical, life, and earth sciences, the social sciences, and business. A student may expand the approved minor to form a double major with mathematics. The requirements for this option are: (a) Math. 21, 22, 121, CS 21, Math. 124, 230, and 237; (b) at least nine additional hours in mathematics, statistics, or computer science courses number 100 or above, at least three of which must be in mathematics or statistics, at least six of which must be numbered 200 or above; (c) an approved minor. Parts (b) and (c) must form a coherent program that has the written approval of the student's faculty advisor in the Mathematics and Statistics Department.

MUSIC Students may apply to either the Bachelor of Arts or Bachelor of Music programs. Arrangements for auditions should be made with the Music Department. Those admitted as first-year students or sophomores to either degree program are considered *Candidates* in the program. Admission as *Majors* is made at the beginning of the junior year following formal review procedures during the second semester of the sophomore year.

All students in programs which require a senior recital, including students transferring into these programs, must pass a junior standing examination at the end of the sophomore year, or before junior standing can be achieved in the case of transfer students. All students approaching a senior recital must pass a faculty audition covering all of the music to be included on the recital six weeks prior to the date of the recital.

One foreign language through the intermediate level is required of all students.

Bachelor of Arts: Forty hours in Music. Majors will take the following core courses: 11, 12 (history); 31, 32, 131, 132 (theory); and 133, 134 (theory lab); plus eight hours of performance study and ensemble in any combination (excluding Music 5–8).

All students will elect nine additional hours — at least three at the 200 level — in one of the following three categories, plus three hours in a category different from that of the chief concentration.

(a) Theory: 231-235
(b) History: 111-114, 211-214
(c) Performance: 251-253, 256

A mixture of categories may be possible in consultation with a departmental advisor.

Music majors with a concentration in categories (a) or (b) must attain intermediate level on a single instrument chosen from the department's offerings.

Concentration in category (c) requires an appearance each semester in departmental recitals, passing a junior standing examination at the end of the sophomore year, and a solo recital in the senior year.

Majors must have, or acquire, piano skills sufficient to pass the piano proficiency examination, in addition to the eight hours of performance and ensemble study.

Bachelor of Music: This degree, with a concentration in performance or theory, is the initial preprofessional collegiate music degree, designed for highly talented students who wish to pursue a career in music as performers, scholars, or private teachers. To earn the degree, they must demonstrate not only technical competence but also a broad knowledge of music and musical literature, sensitivity to musical style, and an insight into the role of music in society. Candidates with a strong sense of commitment ordinarily continue their studies through postgraduate work before they are fully qualified as professionals. Admission as a Candidate in the Performance major program requires an audition with the Music Department. Acceptance as a Major requires passing the junior standing examination. The final graduation requirement is a senior recital. Admission to the Theory major requires successful completion of a comprehensive theory examination at the end of the sophomore year. Transfer students with advanced standing must also pass this examination before they can be accepted as Theory majors. The curriculum consists of the following courses:

Performance Major	Hours
(a) Major instrument, 151, 152, 153, 154, 251, 252, 253, 256	28
(b Theory, 31, 32, 131, 132, 133, 134, 231, 232, 233	26
(c) History, 11, 12	6
(d Ensemble	14
(e) Keyboard, 5, 6, 7, 8 (if necessary)	4
(f) Music electives	9
(g) Nonmusic electives	36
(h) Physical education	2
	125

Theory Major	Hours
(a) Major instrument, 151, 152, 153, 154, 251, 252, 253	12
(b) Theory, 31, 32, 131, 132, 133, 134, 231, 232, 233, 234, 235, 237, 238, 240, 241	43
(c) History, 11, 12	6
(d) Ensemble	6
(e) Keyboard 5, 6, 7, 8 (if necessary)	4
(f) Instrumental choirs	4
(g) Music genre electives	9
(h) Nonmusic electives	36
(i) Physical education	2
	122

For Music Education see College of Education and Social Services.

PHILOSOPHY Thirty hours including: (a) 101 and 102; (b) a total of at least four 200-level courses in Philosophy. Students considering graduate work are urged to take Philosophy 13 and to study a foreign language.

PHYSICS Students may select either of two degree program:

Bachelor of Arts: Thirty-two hours in Physics, including 31 with 21, 42 with 22, 128 with 130, 201 or 202, 211, 213, 273; mathematics through 121 and three hours of approved mathematics electives; Computer Science 21. An additional laboratory science is strongly recommended.

Bachelor of Science: All courses in core and all courses in one of the listed options. Core: Physics 31 with 21, 42 with 22, 128 with 130, 211, 213, 214 and 273; Math 21, 22, 121, 271 and 272 or 124 and 130; Chemistry 31 and 32; Computer Science 21. Options: (a) Pure Physics: Physics 201, 202, 265, twelve hours of approved physics electives. (b) Mechanical Engineering: ME 12, 14, 40 with 44, 42, 101, 111, and 143; CE 1; EE 100. (c) Civil & Environmental Engineering: CE 1, 10, 100, 150, 170 and 173; ME 12, 40 with 44; EE 100. (d) Electrical Engineering (Signals and Systems): EE 3, 4, 81, 82, 120, 121, 171, 174, 275 and one course from 276, 277, 295; recommended elective Statistics 270. (e) Electrical Engineering (Circuits and Devices), EE 3, 4, 81, 82, 120, 121, 131, 163, 183, 184, 221.

POLITICAL SCIENCE

Thirty hours in Political Science:

1. Four (12 hours) core courses (21, 41, 51, 71).
2. Eighteen hours at the advanced (100 or 200) level, three hours of which must be at the 200 level, subject to the following restrictions:
   a. Students must complete at least one advanced (100 or 200) course in three different subfields.
   b. Of these 18 hours at the advanced (100 or 200) level, students must complete at least 12 of those hours, including three hours at the 200 level, in regular UVM political science courses (e.g., excluding study abroad, transfer credit, readings and research).

Note: Internships will not count toward the 30 hours required for the major.

PSYCHOLOGY Students may select either of two degree programs: the Bachelor of Arts or the Bachelor of Science. Within the Bachelor of Science degree program, students may select either the traditional Psychology concentration or the Biobehavioral concentration.

Bachelor of Arts: Thirty-five hours including: (1) 1, 109, 110, 119; (2) three of the following: 121, 130, 152, 161; (3) one course from each of the following categories A, B, and C: (A) 205, 206, 207, 208, 215, 220, 221, 222, 223; (B) 230, 231, 233, 234, 236, 237, 239, 240, 241, 254*, 257*, 261, 262, 263*, 265, 266, 268; (C) 250, 251, 252, 253, 254*, 255, 257*, 259, 263*; (4) one additional course at/above 100 level.

*Category B or C, but not both.

Bachelor of Science: Forty-four hours of psychology including 1, 109, 110, 119, 121, 130, 152, 161, and upper division psychology courses as described below; Math. 13, 14, or 19, 20 or 21, 22; biology courses as indicated below; and at least three additional hours in an approved science or statistics. For a list of approved offerings in science and statistics, consult the Psychology Department Office. Students opting for a Bachelor of Science degree in Psychology must also complete the College of Arts and Sciences distribution requirements for a B.S. degree and they may not use psychology courses to fulfill the social sciences category.

Traditional Concentration: This concentration is most appropriate for students wishing a broader training in psychology, often in preparation for graduate school. Required courses include: Biology 1, 2; one course from each of the following categories A, B, and C: (A) 205, 206, 207, 208, 215, 220, 221, 222, 223; (B) 230, 231, 233, 234, 236, 237, 239, 240, 241, 254*, 257*, 261, 262, 263*, 265, 266, 268; (C) 250, 251, 252, 253, 254*, 255, 257*, 259, 263*. The remaining hours must be psychology courses at or above the 100 level. Independent research is encouraged and these hours may be counted towards the total 44 hours required. A minor in mathematics, statistics, or biology is strongly recommended.

*Category B or C, but not both.

Biobehavioral Concentration: Students who are interested in behavioral neuroscience and related medical fields, including premedicine preparation, should select this concentration. Required courses include: Biology 1B,

2B; three category A courses, one from each of the following subcategories (i) 221 or 222, (ii) 205 or 220, (iii) 206 or 223; and one course from 207, 208, 215, 230, 231, 233, 234, 236, 237, 239, 240, 241, 250, 251, 252, 253, 254, 255, 257, 259, 261, 262, 263, 265, 266, 268. The remaining hours must be psychology courses at or above the 100 level. Independent research is encouraged and these hours may be counted towards the total 44 hours required. A science minor is strongly recommended.

RELIGION Thirty-six hours in Religion, including 100 and 201; one course chosen from the 20-27 range; one course from the 101-109 range (comparative); one course from the 110-130 range (Biblical traditions); one course from the 130-149 range (Asian traditions); an additional course at the 200 level. Religion 130 may count for either the Biblical or Asian traditions requirement, but not for both. Up to six hours in related courses may be substituted. A list of approved courses is available from the Religion Department.

RUSSIAN Thirty hours of courses in Russian at the 100 level or above among which at least one course must be Russian literature in translation (WLIT 118); one additional course in English literature or world literature; one Russian history course; and two additional courses chosen from among the listings of the Russian and East European Area Studies Program. All course work to be chosen in consultation with the student's major advisor.

SOCIOLOGY Thirty-four hours in Sociology including Sociology 1; 100 and 101; three hours in each of three different areas at the 100-level (total nine hours); and three hours in each of the three different areas at the 200 level (total nine hours). It is recommended that 1, 100, and 101 be completed before the start of the junior year. 1 and 100, or 1 and 101, or instructor's permission is a prerequisite for enrollment in any 200-level course. Students planning to concentrate in a particular area of study are strongly encouraged to take an additional 200-level course in that area. Students planning postgraduate training in Sociology or related areas are strongly encouraged to take at least two courses from the advanced Theory/Methods area (274, 275, 279). Areas and their approved courses are: Crime, Law, and Deviance: 115, 118, 214, 216, 217, 255, 258; Social Inequality: 119, 122, 132, 219, 232, 239, 240, 254; Social Change and Development: 102, 103, 105, 163, 171, 203, 205, 206, 207, 211, 213, 272; Culture, Institutions, and the Individual: 109, 141, 150, 151, 161, 209, 225, 243, 250, 252, 288, 289; The Life Course: 120, 154, 161, 221, 222, 223, 229; Theory and Methods: 274, 275, 279.

*Courses numbered 195, 196, 281, 282, 295, or 296 may qualify to fulfill area requirements with approval of the student's advisor.

SPANISH A minimum of thirty-three hours of courses numbered above 100*, of which: twelve must be in literature and eighteen must be in courses numbered above 200*. Required courses among those thirty-three hours: Spanish 140; one 3-credit course in Spanish American literature (142, 279, 281, 286, 287 or Topics); one 3-credit course in Spanish Peninsular Literature (141, 235, 236, 237, 245, 246, 250, 251, 252, 255, 256, 257 or Topics); one 3-credit course in culture and civilization (290, 291, 292, 293, 294 or 299). At least one of the literature courses taken must be devoted specifically to literature written before 1800 (Examples are 235, 236, 237, 245, 246, 287 or Topics on pre-1800 literature).

*Only three credits of Readings and Research (197, 198) and Advanced Readings and Research (297, 298) may be counted toward the major.

THEATRE A total of 48 hours to include 10, 20, 30, 40, 50, 110, 130 or 140, 150, 151, 250, 251; three hours in 190: Theatre Practicum; nine hours in selected area of emphasis: Design/Tech; or Performance; or History/Criticism. Design/Tech: 41, 42, 120, 130, 131, 140, 141, 142, 143, 144, 160, 200, 230; Performance: 111, 112, 200, 210; History/Criticism: nine hours from English 127, 128, 152; Classics 153; Theatre 200; or other courses by departmental permission.

Note: Students entering the College of Arts and Sciences should be advised that Theatre 1 is not recommended for students intending to major or minor in Theatre. Those students should enroll in required courses immediately. If Theatre 1 is taken, it will not be counted toward the required 48 hours for the major but will be counted toward the total 122 hours required for graduation.

WOMEN'S STUDIES A total of thirty-six hours (twelve courses) are required for the major. (a) Core (twelve hours): Women's Studies 73, 101, 273, and 191 or 192; (b) Electives (nine hours): One additional race/ethnicity class beyond the A&S requirement, one additional non-European culture class beyond the A&S requirement and any one course in fine arts or humanities cross-listed with Women's Studies. (c) Concentration (fifteen hours): An individually-designed concentration consisting of five approved Women's Studies electives, at least four of which are at or above the 100 level.

ZOOLOGY Students may select either of two degree programs:

Bachelor of Arts: Chemistry 31, 32 or 35, 36, to be taken the first year if possible; 141, 142; Math. 19, 20 or 21; Physics 21, 22 in combination with 11, 12 or preferably 31, 42. Thirty-three hours of Biology including Biology 1, 2, 101, 102, 103, 104, and three advanced courses (including one with lab).

Bachelor of Science: Chemistry 31, 32 or 35, 36, to be taken the first year if possible; Chemistry 141, 142; Physics 21, 22 in combination with 11, 12 or preferably 31, 42; Math. 19, 20 or 21, 22; Statistics 141 or 211. Forty-three hours of Biology and Zoology courses including Biology 1, 2, 101, 102, 103, and 104. The remaining credits may be chosen from Biology 203, 205, and 200-level Biology courses. Three hours of Biology undergraduate research or honors may be counted toward the total of the 43 required credits.

MINOR REQUIREMENTS

Please note that a "+" indicates that the minor is NOT available to students pursuing degree programs not offered by the College of Arts and Sciences.

ALANA STUDIES

In selecting courses from the ALANA (African, Latino, Asian, Native American) Studies listing for a minor, students should consult with an appropriate ALANA Studies advisor and demonstrate that their course of study will have a U.S. multicultural dimension.

A total of 18 credit hours to include ALANA Studies 277, at least 12 hours of which must be at the 100 level or above, selected from the following: ALANA Studies 51, 55, 95, 96, 158, 159, 191, 192, 195, 196, 277, 295, 296, 297, 298; Anthropology 160, 164, 169, 187; Economics 153; English 57, 66, 167, 170; Geography 60; History 60, 68, 168, 169, 187, 188, 189; Music 42, 44; Natural Resources 6; Political Science 129; Religion 80; Social Work 167; Sociology 19, 31, 119, 219; World Literature 16, 116, *or* appropriate Special Topics or seminar courses chosen in consultation with an ALANA Studies advisor.

ANTHROPOLOGY

+Social Anthropology: 21; two 100-level topical courses plus one 100-level "peoples" course, or one topical and two "peoples" courses; and any 200-level course except 200, 210, 297, 298.

+Archaeology: 24; 210; three from the following: 160, 161, 188, 200, 250.

Sociolinguistics: 128; 178; two "peoples" courses from 160, 161, 162, 163, 165, 166, or 168; 284 or Psychology 237.

AREA AND INTERNATIONAL STUDIES

African Studies: A total of 18 credit hours (six courses), at least nine of which must be at the 100 level or above, and which must include the following:

A. Anthropology 162
   Geography 51
   History 40
B. Two courses chosen from among the following:
   Community Development and Applied Economics 2, 272
   *Anthropology 170, 177, 179, 283
   BSAD 237
   *Education (EDFS) 206
   French 289
   *Geography 177
   History 140

or appropriate Special Topics or seminar courses, chosen in consultation with the African Studies Program advisor.

*Students may count these courses towards fulfillment of the minor requirements only if individual projects, relevant to the African area, have been arranged in consultation with the African Studies advisor.

C. International Studies 197 (Readings and Research on an African Topic under the direction of participating faculty members — to be arranged in consultation with the African Studies advisor) *or* International Studies 195 (Special Topics Seminars, taught by participating faculty members).

Asian Studies: In selecting courses from the Asian Studies listing, students must consult with an appropriate Asian Studies advisor and demonstrate in their choices thematic and/or geographic coherence. Such courses must also accord with the following requirements:

Eighteen hours in courses from the Asian Studies listing (see Courses of Instruction; Asian Studies) including at least two courses in an Asian language, and at least one course in each of two other academic disciplines. At least eight credit hours must be at the 100 level or above. For students who have demonstrated fluency in an Asian language relevant to the other courses they have chosen for their minor concentration (for instance, native speakers of the language) the language requirement will be waived, and courses from a third academic discipline will be substituted.

Canadian Studies: Eighteen hours to include International Studies 91 or History 66 (History 65 upon approval of advisor), and 15 hours to be chosen from the Canadian content list (see major listing for approved courses) of which at least 12 hours must be at the 100 level or above. Students will fulfill the language requirement with French.

Latin American Studies:

A. Students who are not Spanish majors: 18 hours (six courses)
   1. Completion of Spanish 52 or above (three hours).
   2. Completion of five of the following courses: Anthropology 161; History 62 or 63, 161, 163, 164 or 262; Geography 56; Political Science 174; Spanish 142, 279, 281, 286, 287, 293, or 294; International Studies 195 or 196.
B. Students who are Spanish majors: 18 hours (six courses)
   1. Completion of one of the following courses: Spanish 279, 281, 286, 287, 293, or 294.
   2. Completion of five of the following courses: Anthropology 161; History 62 or 63, 161, 163, 164 or 262; Geography 56; Political Science 174; International Studies 195 or 196.

Middle East Studies: Eighteen hours (six courses) to include: Completion of the College language distribution option or the transfer of equivalent credits. Familiarity with an appropriate Middle East language, e.g. Hebrew, Arabic, Turkish, Farsi, etc., is strongly recommended; History 45; four courses taken from the following groupings, but no more than one course from Group B and no more than one course below the 100 level:

Group A: Anthropology 166, 170; Art 146, 188; Economics 180; Geography 158; History 123, 149; Religion 114, 116; Political Science 157, 259, 279 (when the topic is Middle East).

Group B: English 172; Geography 51; History 40, 140; Math. 161.

Russian/East European Studies: Twenty hours to include Russian 51, 52 or its equivalent, and four courses from the following: Economics 116; World Literature 118; History 27, 137, 138; Political Science 172.

European Studies: Eighteen hours to include three hours at the 200 level from both European culture and thought and European history and society areas; and six hours at the 100 level or above from the European language area.

Note: See the European Studies major requirements for list of approved courses.

ART

+Studio Art: Eighteen hours, including six hours at introductory level of which at least three hours must be in 1, 2, 3, or 4. Twelve hours at the 100 level or above.

Art History: Eighteen hours, including six hours from 5, 6, and 8; 12 hours of 100-level courses or above.

BIOLOGY Biology 1, 2; three courses at the 100 level or higher chosen from courses acceptable for the Biology major, at least one of which must include a laboratory. One course may be taken from the advanced offerings of other biologically-oriented departments. Consult the Biology Department for a list of approved courses.

BOTANY At least 15 hours of course work to include Botany 4 or Biology 1 or Biology 2; plus three additional courses in Botany, at least one at the 200 level.

CHEMISTRY

A. Chemistry 31, 32 or 35, 36.
B. One of the two following sequences:
   1. Chemistry 141, 142* and one of the following: 121, 131, 160, 161, 162, 221 (with instructor permission).
   2. Chemistry 161, 162, and one of the following: 42, 141.

*143, 144 can be used in place of 141, 142.

CLASSICS

Latin Language and Literature: Fifteen hours of Latin at 51 or above, to which three hours from the following are applicable: Classics 122, 153, 154, 155, 156, 158, 159.

Greek Language and Literature: Fifteen hours of Greek at 51 or above, to which three hours from the following are applicable: Classics 121, 153, 154, 155, 156, 157, 158.

Classical Civilization: Eighteen hours, including six hours of Greek or six hours of Latin at the level of 51 or above, and 12 hours from the following (of which at least nine hours must be above 100): Classics 21, 23, 24, 33, 35, 37, 42, 121, 122, 149, 153, 154, 155, 156, 157, 158, 159; Art 146, 148, 149; all Classics, Latin, or Greek courses to include special topics courses (95, 96, 195, 196, 295, 296).

+COMMUNICATION SCIENCES 80, 90, 94, 101, 105, 208 or 215.

COMPUTER SCIENCE Eighteen hours in Computer Science to include 100 or 103, 104, and three additional hours at the 100 level or above.

EAST ASIAN LANGUAGES

Chinese: Fifteen credit hours of Chinese with at least eight of those hours at or above the 100 level, including 102 or its equivalent. Three credit hours at or above the 100 level in Chinese linguistics or literature may be substituted for three credits of language study beyond 102 or its equivalent.

Japanese: Fifteen credit hours of Japanese with at least eight of those hours at or above the 100 level, including 102 or its equivalent. Three credit hours at or above the 100 level in Japanese linguistics or literature may be substituted for three credits of language study beyond 102 or its equivalent.

ECONOMICS Eighteen hours including Economics 11, 12; and four courses numbered 20-196, three of which must be numbered 110-196.

+ENGLISH Eighteen hours including six hours taken from one of the following sequences: 21-22, 23-24, 25-26, 27-28, or 85-86; and a minimum of nine credits at the 100 level or above.

+FILM STUDIES Eighteen hours, including Art 140; Film 5 or 6; six credits from Film courses at the 100 level to include 107; three credits from English 110, 152, 163, Psychology 163, Sociology 43, Theatre 50; three credits from Film courses at the 200 level.

ENVIRONMENTAL SCIENCES

Chemistry emphasis: Chemistry 31, 32; 121 or 42; and two additional upper-division non-chemistry courses chosen in consultation with co-advisor.

Biology emphasis: Biology 1, 2 or 11, 12; 102, and two additional upper-division non-biology courses chosen in consultation with co-advisor.

Geology emphasis: Geology 55, 101, 155, and two additional upper-division non-geology courses chosen in consultation with co-advisor.

ENVIRONMENTAL STUDIES Seventeen hours in Environmental Studies consisting of 1, 2, and nine hours at the 100 level or above, including three hours at the 200 level. (Of the nine hours, one non-ENVS course at the appropriate level may be substituted with the approval of the student's advisor and the Environmental Program.)

FRENCH Eighteen hours in French numbered 100 or above. Required courses: French 101; and three of the following four: 104, 105, 111, 112. Six of the 18 credits must be in courses at the 200 level. Readings and Research (197, 198) or Advanced Readings and Research (297, 298) may not be counted toward a minor.

GEOGRAPHY

Five courses (fifteen hours) which must include: one course from this array: 1, 2, 43, 60, 73, 81; any one regional course (from 51, 52, 55, 56, 57, 90, 92, 151, 154, 155, 162, 190, or 192); any three courses at the 100-level or above.

GEOLOGY One Geology course below 100 level, 101, 102; plus six additional hours at the 100 level or above.

GERMAN AND RUSSIAN

German: Five courses at the 100 or 200 level, one of which must be 155 or 156.

Russian: Russian 51, 52; four courses in Russian at the 100 or 200 level.

HISTORY Eighteen hours of history including three hours in any course at the introductory level (00), plus nine hours at the intermediate level (100) or advanced level (200). These must also include six hours in each of two of the department's areas of study (Western Hemisphere; Europe; Africa/Asia/Latin America).

INDIVIDUAL DESIGN MINOR The ID Minor must consist of at least 18 hours of course work, of which at least nine hours must be at the 100 level or above. No more than nine hours completed prior to application for the ID Minor may be applied to the 18 hours required for the proposed minor. No courses in the student's major department may be applied to the 18 hours required for the minor. An application must be submitted to the Committee on Honors and Individual Studies for approval. Applications may be found in the Dean's Office, College of Arts and Sciences.

ITALIAN Eighteen hours in courses taught in the Italian language and numbered 100 or above. Readings and Research (197, 198) or Advanced Readings and Research (297, 298) may not be counted toward a minor.

ITALIAN STUDIES Eighteen credit hours as chosen from among the following categories: (1) Italian content (classes taught in the Italian language numbered 100 or above); (b) significant Italian content (Art History 149, 161, 164, 282 [when the topic is Italian]; Classics 122; English 122; World Literature 13, 113; Geography 158; History 124, 125; Latin 51, 52, 101, 102, 111, 112, 155, 156; all 200-level courses in Latin literature; Music 11); (c) partial Italian content (Art History 5, 6, and the following where the content is partially Italian: 155, 165; Classics 23, 155, 156, 159; English 125; Film 107, 161; Geography 55, 155; History 24, 25, 26; Political Science 141, 142; Music 12). At least six hours must be taken from category (a) and no more than six credit hours from category (b) may be applied from any one discipline. No more than three credit hours from category (c) may be applied to this minor.

MATHEMATICS

Pure Mathematics: Math. 21 (or equivalent), 22, 52 or 121, and nine additional credits in Mathematics courses numbered 100 or above. Computer Science or Computer Engineering majors may substitute Math. 54 for 52. The course plan for a Mathematics minor must be approved by a Mathematics faculty advisor.

Applied Mathematics: Fifteen hours of mathematics courses numbered 52 or higher, including one of 230, 237, 271.

MUSIC Twenty hours including six in Music History (11, 12), six in Basic Musicianship (31, 32), two in Performance Study (151, 152) or Ensemble (161-165, 171-179) in any combination, plus six in History, Theory, or Performance/Ensemble at the 100 level or above.

PHILOSOPHY One course from 101, 102, 140; one course from 201, 202, 240; and 12 additional hours in Philosophy, at least three of which must be at the 100 level or above.

PHYSICS Seventeen hours including 31 with 21, 42 with 22, 128 with 130, and three additional hours at the 200 level excluding 201 and 202. *Note:* Mathematics through 121 is needed for 128.

POLITICAL SCIENCE Eighteen hours in political science, including nine hours from the "core" courses (21, 41, 51, 71), and nine hours at the level of 100 or above. Of the nine hours at the 100 level or above, students must complete at least six hours in regular UVM political science courses (e.g., excluding study abroad, transfer credit, readings and research). Internships will not count toward the eighteen hours required for the minor.

+PSYCHOLOGY Nineteen hours including 1, 109, plus 12 hours at the 100 level or above, including at least three hours at the 200 level.

RELIGION Eighteen hours in Religion including: one introductory course from the 20-27 range; 100; one course from 101-109 range; one intermediate level course on a particular religious tradition (from 110-149); one course at the 200 level; an additional Religion course.

SOCIOLOGY Eighteen hours in sociology including Sociology 1; either 100 or 101; three hours in each of two different areas at the 100-level (total six hours); three hours at the 200-level (total three hours). (See Sociology major requirements for list of approved area options.) It is recommended that 1 and 100 or 1 and 101 be completed before the start of the junior year, 1 and 100, or 1 and 101, or instructor's permission, is a prerequisite for enrollment in any 200-level course.

GERONTOLOGY The minor in Gerontology consists of 18 hours. Required courses (12 hours): Sociology 20, 120, 220, and 221 or 222. Electives (six hours): Anthropology 189; Communication Science 220; Early Childhood and Human Development 266, 283; Nursing 100; Sociology 154, 254.

Courses used to meet the requirements of the minor should constitute a coherent program and will be selected in consultation with the student's minor advisor. A list of current course offerings suitable for the minor, including special topics courses in individual departments, is available from the Department of Sociology or the Center for the Study of Aging.

Note: The Minor in Gerontology is not available to students majoring in Sociology. Sociology majors interested in Gerontology should, instead, take the Social Gerontology Concentration to fulfill the concentration requirement for the Sociology major.

SPANISH Eighteen hours in Spanish above 100, including: Language: six credits from 101, 201, 202; Literature: six credits (3 of those credits must be in Spanish 140); Electives: six additional credits from courses numbered above 202. Readings and Research (197, 198) or Advanced Readings and Research (297, 298) may not be counted toward a minor.

STATISTICS Students must have a minor advisor in the Statistics Program and are required to complete:

A. Fifteen hours of Statistics courses, of which at least nine must be at the 100 level or above. One of the following introductory courses is required: 111, 141, 143 or 211. No more than six credits of Statistics 11, 51, 111, 140, 141, 143, or 211 may be applied toward the minor. (Note that credit will not be given for both 11 and 111, or for more than one of 111, 140, 141, and 143, without prior special permission from the Statistics Program.)
B. Math. 19 or 21, or the equivalent.
C. Statistics 201, or Computer Science 16 or higher.

THEATRE Nineteen hours to include: 10, 150, 151; two credits of 190; and two of the following: 20, 30, 40.

SPEECH Eighteen hours to include 12 hours from Speech 11, 111, 112, 283-4 or Theatre 5; and six hours from Speech 214 or 283-4, or Sociology 141.

VERMONT STUDIES Eighteen hours (at least five courses), of which at least nine hours must be at the 100 level or above. As an interdisciplinary minor, it must include at least fifteen hours from departments outside the major. Completion of Vermont Studies (VS) 52, three of the following VS courses: 55, 64, 92 or 192, 123, 160, 184, and two additional courses from an approved list chosen in consultation with the Vermont Studies advisor.

WOMEN'S STUDIES Eighteen hours of course work to include WST 73, 273 and six hours at the 100 level or above to be chosen with the approval of the Women's Studies Committee or the consent of a Women's Studies advisor. Students may take a maximum of nine hours in any one discipline toward the minor. Not all sections of a multisection course will necessarily meet Women's Studies approval for the minor. (Students should consult the course listings each semester for further details.)

ZOOLOGY Biology 1 and 2; three courses at the level of 100 or above, chosen from courses within the Biology department, at least one of which must include a laboratory.

CROSS-COLLEGE MINORS

The following minors must be completed in the following format. They have been approved by the College of Arts and Sciences and will fulfill minor requirements for Bachelor of Arts, Bachelor of Science, and Bachelor of Music candidates. **No other minor in this catalogue will fulfill the minor requirement.**

EDUCATION AND SOCIAL SERVICES

Human Development and Family Studies: Eighteen hours including HDFS 5, 60, 65; three 100- or 200-level HDFS courses, except 291, 296. **This minor cannot be the sole minor for sociology or psychology majors but is acceptable as a second minor, especially for persons interested in careers involving work with families and youth.**

NATURAL RESOURCES

Forestry: A minimum of 16 credit hours is required, with at least nine of these hours at the 100 level or above. Required courses for non-SNR majors: 1 or 73; 21; and additional Forestry courses to total 16 credit hours.
Recreation Management: Nine hours from 1, 50, 138, 153, 157, 158, 181; and six hours from 230, 235, 240, 255, 258, 282.
Wildlife Biology (WFB): Fifteen hours to include WFB 130, 174; 271 or 273 and the remaining hours from 131, 175, 176, 185, 187, 224, 271, 272, 273, 274, 275, 279, 285, 287.

AGRICULTURE AND LIFE SCIENCES

Animal Science: Five courses with a minimum of 15 credit hours, including Introductory Animal Science (ASCI 1), two courses in Core Science including ASCI 43, 110, 122, 141, 205, 215, 216, and two courses selected from Applied Sciences including 113, 115, 117, 118, 134, 135, 161, 211, 220, 230, 231, 233, 234, 263, 264. At least 8 credits must be at the 100 level, 3 of which must be at the 200 level. Acceptance into this program is by application only. Contact Dept. of Animal Science, 102 Terrill, for more information.

Applied Design: Fifteen hours including nine in required courses CDAE 15, 16, or 1; 231 or 101. After completing the required courses that will enhance problem-solving and visualization skills, student select two additional courses that will define a particular focus within design. The student's advisor must preapprove the two focus courses. Nine of the 15 hours must be at the 100 level or above. The Applied Design minor is not available to students majoring or minoring in Studio Art.

Small Business (CDAE): 61, 166, 167, 168, 266.

Consumer and Advertising: Fifteen hours including CDAE

15, 127, 128, 183, and an advisor approved elective.

Consumer Economics: Fifteen credits including 9 in required courses CDAE 127, 157, 255; six hours from the following restricted electives: CDAE 102, 128, 158, 159, 250.

Microbiology and Molecular Genetics†: Core requirements are MMG 101 and 102, and Botany 132, plus an additional six credit hours of MMG courses chosen from 195, 201, 203, 211, 220, 222, 223, and 225 depending on students needs.

†A student may minor in Microbiology and Molecular Genetics upon permission of the departmental Undergraduate Affairs Committee and assignment of a minor advisor within the department who will direct the student's program plan and course selection.

Nutrition and Food Sciences (NFS): A total of 15 credit hours in NFS courses including 43, 53, 143; and six credits of NFS courses from the following: 63, 123, 150, 153, 163, 165 or any 200-level course approved by the student's advisor that will define a particular focus. *Note:* Independent Study and Field Experience and undergraduate research cannot be used toward the minor. **Arts and Sciences students must select at least eight credits of NFS course work at or above the 100 level.**

Plant and Soil Science: Sixteen hours including PSS 10 or 11, 161, plus any three additional PSS courses at the 100 level or above.

Sustainable Agriculture: Fifteen hours to include: CDAE 61, CDAE 208, PSS 152, one elective at 100 or 200 level in ASCI/CDAE/PSS (see list of approved electives in Department or Dean's Offices) and three to six hours of internship at 100 or 200 level in AGRI/ASCI/CDAE/PSS.

Note: Students should take their four academic courses **before** they design their internship experience. Thus the internship will serve as a culminating event in this program of study. The College of Arts and Sciences requires their students to receive a letter grade for internships taken in minor programs of study.

ALLIED HEALTH SCIENCES

Molecular Diagnostics (BMT): Fifteen-sixteen hours to include: 242, 244, BMED 281, 293, 297, and one elective course from BMT 4, 54, 123, or MLS 222, 231, or 255. Prerequisites are Chemistry 31, 32 or 23; 141, 142 or 42; Biology 1, 2 or Anatomy and Physiology 19–20; a 2.5 in these courses. Acceptance into this program by application only and limited to six new students per year. Contact Department of Biomedical Technologies, 302 Rowell, for more information.

BUSINESS ADMINISTRATION

Accounting (BSAD): 65 (or 60 and 61) 161, 162, 164, 168. Prerequisites are Economics 11, 12; Math. 13, 19 or 21; Statistics 141; a 2.0 in these courses. Acceptance into this program by application only. Contact Student Services, School of Business Administration, 218 Kalkin, for more information.

Business Administration (BSAD): 65 (or 60 and 61), one course from 120, 132, 141, 150, 173, 180 and two additional courses numbered 100 – 299. Prerequisites are Economics 11, 12; Math. 13, 19 or 21; Statistics 111 or 141; a 2.00 in these courses. Acceptance into this program by application only. Contact Student Services, School of Business Administration, 218 Kalkin, for more information.

The following Arts and Sciences Minors are available to students not pursuing degree programs offered by the College of Arts and Sciences:

ANTHROPOLOGY
- Sociolinguistics**

ALANA STUDIES

AREA AND INTERNATIONAL STUDIES
- African Studies
- Asian Studies
- Canadian Studies
- European Studies
- Latin American Studies
- Middle East Studies
- Russia/East European Studies

ART
- Art History**

BIOLOGY
- Biology
- Botany
- Zoology

CHEMISTRY

CLASSICS
- Greek
- Latin
- Classical Civilization

COMPUTER SCIENCE

ECONOMICS

EAST ASIAN LANGUAGES
- Chinese
- Japanese

ENVIRONMENTAL SCIENCESENVIRONMENTAL STUDIES

FRENCH**

GEOGRAPHY

GEOLOGY

GERMAN

HISTORY**

ITALIAN**

ITALIAN STUDIES**

MATHEMATICS
- Pure Math
- Applied Math
- Statistics

MUSIC

PHILOSOPHY**

PHYSICS

POLITICAL SCIENCE

RELIGION**

RUSSIAN

SOCIOLOGY
- Sociology
- Gerontology

SPANISH**

THEATRE**
- Theatre
- Speech

VERMONT STUDIES**

WOMEN'S STUDIES**

**Students must receive departmental approval.

The College of Education and Social Services

The College of Education and Social Services (CESS) offers programs in Human Development, Social Work, and Teacher Education (Art, Early Childhood Education PreK-3, Elementary, Family and Consumer Sciences, Middle Level, Music, Physical Education, and Secondary Education). First-year students may elect an Undecided major while exploring the above options within the College. Students who have completed one year of course work at UVM and who demonstrate interest in an area of study related to CESS offerings may pursue an Individually Designed program. All programs require course work in the liberal arts and sciences along with professional preparation through course work and internships in school and community settings.

The College, through the Physical Education Program, offers an Athletic Training concentration. Students who are enrolled in a degree program at UVM may apply.

Enrolled UVM students wanting to transfer may secure an application at the Office of Student Services (528 Waterman Building) in the College of Education and Social Services. Students enrolled in appropriate programs in other colleges may apply to complete teacher licensure requirements for Secondary Education while they remain in their home college. Information and applications for admission to the Teacher Education program are available in the Secondary Education Office, 405A Waterman.

The College of Education and Social Services and the Community College of Vermont have Articulation Agreements for the following programs: Human Development, Social Work and Teacher Education programs in Art, Early Childhood and Secondary Education. Refer to the Articulation Agreement information in the Admissions section of this catalogue.

DEGREE PROGRAMS

Programs in the College of Education and Social Services lead to four bachelor's degrees.

Bachelor of Science. The programs listed below lead to this degree.

Human Development and Family Studies. This program examines the way people grow and develop, form relationships and families, and learn to cope with the common and uncommon events of life.

Social Work. The principal educational objective of the program is to prepare students for beginning social work practice with individuals, families, small groups, organizations, and communities.

Teacher Education/Early Childhood Education PreK-3. The Early Childhood program offers licensure for birth through grade 3.

Teacher Education/Family and Consumer Sciences (7-12). The Family & Consumer Sciences program offers licensure for grades 7-12.

Bachelor of Science in Art Education.

Teacher Education/Art Education (K-12). The College works cooperatively with the Art Department in the College of Arts and Sciences to offer a program in Art Education which leads to both degree and licensure for grades K-12.

Bachelor of Science in Education.

Individually Designed Major. Earn degree not licensure.

Teacher Education/Elementary (K-6). The Elementary Education program offers licensure through grade 6.

Teacher Education/Middle Level (5-8). The Middle Level Education program offers licensure for grades 5-8.

Teacher Education/Physical Education (K-12). Students who pursue the teacher education program are prepared for teaching grades K-12.

Teacher Education/Secondary (7-12). The Secondary Education program offers licensure for grades 7–12.

Bachelor of Science in Music Education.

Teacher Education/Music (K-12). The College works cooperatively with the Music Department in the College of Arts and Sciences to offer a program in Music Education which leads to both degree and licensure for grades K-12.

In addition to the undergraduate degree programs, the College offers a fifth-year certificate, the Postbaccalaureate Teacher Preparation Program. This program is for individuals who have earned a B.S. or B.A. and now desire to be licensed to teach.

DEGREE REQUIREMENTS

Students must meet standards and requirements for each program approved by the College Academic Affairs Committee, the College faculty, the Dean, and the University Academic Affairs Committee. All programs nationally accredited meet the standards of their professional group: Social Work by the Council on Social Work Education (CSWE); Athletic Training concentration, available through Physical Education, by the Commission on Accreditation of Allied Health Education Programs (CAAHEP); Teacher Education programs (Art, Early Childhood, Elementary, Family and Consumer Sciences, Middle Level Music, Physical Education and Secondary Education) by the Vermont State Department of Education and by the National Council for the Accreditation of Teacher Education (NCATE).

Copies of the degree requirements for each program are available in our Student Services Office (528 Waterman), on the web at www.uvm.edu/~cess/stservices, and are also provided to students during Orientation sessions.

Upon arriving at the University, students receive an Orientation Advising Packet which explains how the requirements can be fulfilled during a four-year period. Discussions with advisors provide students with information needed to plan the time span for program completion which meets their needs. Students who enroll in the College of Education and Social Services are expected to become very familiar with the degree requirements for their programs.

Criminal Record Check (CRC) Requirement

Students who matriculate in the College of Education and Social Services should expect to complete a Criminal Record Check (CRC) as a prerequisite for working in schools and agencies. Evidence of a Criminal Record may prevent students from being eligible to fulfill the field placement/teaching internship requirement.

Human Development and **Social work** majors may be required by individual agencies to complete the CRC to be eligible for an internship in a specific agency. It is also important to note that membership in professional associations upon graduation, at least in the case of most social work associations, typically requires a criminal background check as does employment in an ever-increasing number of human service agencies.

Students enrolled in the **Teacher Education** programs are required to complete the CRC to be eligible for the public school teaching internship and may also be required to complete the CRC during the sophomore and junior years. Each individual school makes the determination concerning the sophomore and junior experiences, but it is a State requirement that all students complete the CRC for eligibility to student teach.

The cost for fingerprints and FBI processing is covered by each individual student and is subject to change.

Disciplinary Action Related To Academic Performance

Disciplinary actions, such as placement on trial, disenrollment, or dismissal are designed to encourage high level academic work from students. The CESS guidelines are more stringent than those for the University and students, including first-year and new transfer students, can be dismissed without first being placed on trial.

A student is subject to academic disciplinary action, including dismissal from the University, if (a) his or her semester or cumulative average falls below 2.0; ***or*** (b) if he or she has failed six or more credit hours of course work in a given semester.

A student who has a cumulative grade-point average of 2.0 or higher, but too low to meet specific program requirements, will be warned of pending disenrollment. Also, students who do not follow course requirements or who have not earned an appropriate grade point average for their program will be warned of pending disenrollment. If at the end of two subsequent semesters the student has failed to meet the requirements (courses and/or gpa) of his/her program, he/she will be disenrolled from the College. Also, students who do not follow the course requirements of their program will also be warned of pending disenrollment.

Students who are placed on trial rather than being dismissed and who do not meet the conditions of trial will then be dismissed.

Students with "on-trial" status will not be allowed to participate in their senior internship, and they will not be eligible to graduate.

Programs of Study

Human Development and Family Studies, Individually Designed, Social Work and Teacher Education (Art, Early Childhood, Elementary, Middle Level, Music, Physical Education and Secondary Education.)

HUMAN DEVELOPMENT AND FAMILY STUDIES PROGRAM

The Human Development and Family Studies program focuses on individual and family development across the life span. Students learn basic and applied concepts of human development and acquire skills in working with individuals and families of different ages and backgrounds in a variety of settings. Field experience is required of all students.

Students in Human Development and Family Studies complete General Education requirements in Behavioral and Social Sciences, Communication Skills, Humanities, Physical and Biological Sciences and Multicultural Electives. They also enroll in a sequence of courses and field experiences designed to provide a comprehensive understanding of individual and family development across the life span. These courses are arranged in two blocks: the introductory core and the advanced core.

The introductory core in Human Development and Family Studies involves three components. The first, Introduction to Human Development I, II and Introduction to Field Experiences, provides students an introduction to the topics pursued in the major, how they relate to everyday life settings, how knowledge in the discipline is gained, and the types of skills necessary to both acquire and use this knowledge. The second component in the introductory core is a course covering individual development across the entire life span. Students learn what is typical of individuals at different points in their lives and the various factors, such as gender and social class, that account for these differences. The third component in the introductory core is a two-semester course dealing with the impact of families and other social institutions such as the school system on individual development. A course on Human Relations and Sexuality completes the introductory core.

The advanced core in Human Development and Family Studies consists of a series of advanced seminars and a field experience. All majors take seminars in Developmental Theory and Family Ecosystems. Four additional advanced seminars must be selected in consultation with an advisor. The field experience requires 15 to 20 hours per week. Students choose a placement from a variety of public and private local agencies. Field placement sites have included museums, affirmative action agencies, the court system, battered women's shelters, centers for abused and neglected children, city and state government agencies, local business and industry, child-care settings, hospitals, senior-citizen centers, and human service agencies.

A typical, but not all-inclusive, program outline follows:

FIRST YEAR	Fall	Spr
HDFS 001–Intro to HDFS and Academic Services	3	–
HDFS 005–Human Development	3	–
HDFS 060–Context of Human Development	–	3
HDFS 065–Human Relationships & Sexuality	–	3
Race & Culture	–	1
General Ed.; Electives	9	9

SOPHOMORE YEAR	Fall	Spr
HDFS 061–Context of Human Development	3	–
PEAC	1	1
General Ed.; Electives	12	15

JUNIOR YEAR	Fall	Spr
HDFS Adv. Seminar	3	3
HDFS 266–Seminar: Theory	–	3
HDFS 260–Family Ecosystem	3	–
General Ed.; Electives	9	9

SENIOR YEAR	Fall	Spr
HDFS 296–Field Experience	6	–
HDFS Adv. Seminar	3	–
General Ed.; Electives	3	15

Human Development and Family Studies is also available as a major concentration for students in the Early Childhood, Elementary, Family and Consumer Sciences, and Physical Education licensure programs, and as a cross-college minor.

INDIVIDUALLY DESIGNED PROGRAM

Students enrolled in the College of Education and Social Services who are interested in an area of study, which isn't offered as one of the current options, may propose an individually designed program of study. Specific criteria and degree requirement information are available in 528 Waterman.

SOCIAL WORK PROGRAM

The Social Work Program provides education for social work practice based on a liberal arts education in the social sciences and humanities. The program is fully accredited by the Council on Social Work Education. Throughout the program of study, students gain the knowledge, values, and skills necessary to provide social services and to effect social change in institutions and the community.

The Bachelor of Science degree in Social Work requires a minimum of 122 approved credit hours, 60 credits of which are general education components from the six approved academic areas (Arts and Letters, Mathematics, Science, Social Sciences, Humanities, Health and Physical Education), including two credits for physical education activities and one credit for Race and Culture Studies. Additionally, students are required to take at least one course that focuses substantially on issues concerned with Africa, Asia, the Middle East, or countries known as the Third World.

The student in consultation with his/her advisor, selects elective courses which will provide the opportunity to develop individual interests. Additional courses in computer science, economics, education, history, philosophy, political science, psychology, sociology, statistics, special education, and women's studies are recommended. Students who intend to pursue a Master of Social Work (MSW) degree are strongly advised to take a course in statistics.

A committee of Social Work faculty may review students' progress periodically throughout the four years. Students may be asked to participate in that process if the faculty deems necessary.

Students must complete the required liberal arts courses with a minimum grade of C-; completion of the initial Social Work courses (SWSS 2, 3, 5, 47, 48, 167) with a minimum grade of C; completion of the upper level Social Work courses (SWSS 164, 165, 166, 168, 169, 171, 172, 173, 174) with a minimum grade of B and an overall GPA in all courses of 2.0.

A typical, but not all-inclusive, program outline follows:

FIRST YEAR	Fall	Spr
SWSS 002–Foundations of Soc. Work	3	–
SWSS 003–Human Needs & Social Services	–	3
ENG 050	3	–
SOC 001	3	–
BIOL 003 or SWSS 005–Biosociopolitical Issues	–	3
POLS 021	–	3
PSYC 001	–	3
Race & Culture	1	–
Gen. Ed.; Electives	6	3

SOPHOMORE YEAR	Fall	Spr
SWSS 047–Human Behavior in the Soc. Env. I	3	–
SWSS 048–Human Behavior in the Soc. Env. II	–	3
SWSS 167–Racism & Contemporary Issues	–	3
Humanities	3	–
EC 011	3	–
PSYC 152	3	–
PEAC	1	–
Gen. Ed.; Electives	3	12

JUNIOR YEAR	Fall	Spr
SWSS 164–Intro Social Work Research	3	–
SWSS 165–Issues & Policy in Soc. Welfare I	3	–
SWSS 166–Issues & Policy in Soc. Welfare II	–	3
PEAC	1	–
Gen. Ed.; Electives	9	15

Typically students apply for SWSS 173 Field Experience in the spring of Junior year. Application for the Field requires consultation with the student's advisor to determine that all introductory and intermediate professional and required courses have been successfully completed. The process includes a written statement that describes the student's interests and qualifications. The advisor and student also review professional readiness issues, including strengths, conduct, maturity, and areas to strengthen. When there are concerns about a student's field readiness, these concerns will be reviewed by the Undergraduate Program Committee, and recommendations will be made.

In the senior year, students spend approx. 15 hours/wk. over two semesters (450 total hours) as interns in a public or private social service agency. Within the same year, students must take SWSS 168, 169, 171, 172, 173, and 174.

SENIOR YEAR	Fall	Spr
SWSS 168–Social Work Intervention I	3	–
SWSS 171–Field Experience Seminar I	3	–
SWSS 173–Field Experience I	6	–
SWSS 169–Social Work Intervention II	–	3
SWSS 172–Field Experience Seminar II	–	3
SWSS 174–Field Experience II	–	6

Students must complete one elective (advisor approved) related to issues of Third World Countries.

TEACHER EDUCATION

The Teacher Education programs include Art, Early Childhood, Elementary, Family and Consumer Sciences, Middle Level, Music, Physical Education and Secondary Education. All students are required to meet specific criteria for admittance into the professional portion of the program and for a teaching internship placement as well as for a recommendation for licensure.

Requirements for Teacher Preparation Programs

Candidacy The professional programs begin with the student enrolling in the College of Education and Social Services as a candidate for licensure. Candidacy status is the stage prior to acceptance into the professional education sequence and, for some programs, may also be available to students enrolled in other colleges at UVM.

Intercollege Transfer Students transferring to the College of Education and Social Services for the Teacher Education programs are required to have a minimum overall grade point average of 2.5 or higher and it must be possible to earn an overall average of 3.0 before reaching program completion.

Academic Major All students who enroll in the Teacher Education programs are required to complete a 30 hour (minimum) major in the liberal arts and sciences. The options are listed on the chart. It is essential for students to complete many liberal arts and sciences requirements during the first two years of their program. Copies of the requirements are available through the Office of Student Services, 528 Waterman and on the web at www.uvm.edu/~cess/stservices.

Students in Secondary Education complete a major (minimum 30 hours) and a minor (minimum 18 hours) or a broadfield major (minimum 48 hours) from a very specific list of options (see chart).

Students in Middle Level Education complete an Individually Designed Interdisciplinary Major Concentration (IDIMC).

Students in Early Childhood, Elementary, Family and Consumer Sciences, and Physical Education complete a 30 hour (minimum) major concentration and have the option of selecting a specific discipline or creating an Individually Designed Interdisciplinary Major Concentration (IDIMC).

Portfolio Development and Professional Licensure In accordance with the Standards for Vermont Educators (Vermont State Board of Education, 1991), students seeking a license to teach must develop documentation that they can perform in ways that address State standards. Each candidate must assemble that documentation in a preprofessional portfolio according to program guidelines. While students have candidacy status, they should maintain a file which includes all materials from courses completed so that selected items can be included in the portfolio.

Application to Teacher Education Candidates who want to pursue teaching as a career apply to the teacher education program of their choice. Applications are available in each departmental office. Once the candidate's application is complete, the program faculty will review the materials which include a record of academic performance at UVM, recommendations from University and public school faculty, evidence of superior course work, passing scores on PRAXIS I as determined for Vermont, and other pertinent sources of information. All students must apply for acceptance into the teacher education segment of their program. Students are required to complete this application and gain acceptance before being eligible to enroll in the professional education courses. This includes: CESS students who are already enrolled as candidates in the teacher education programs; students who transferred to the CESS; and students in other colleges on campus who plan to maintain their primary affiliation with their home college while completing the SDE approved requirements in the CESS.

Students who meet the criteria and are eligible will be accepted. CESS students who do not meet the criteria for admission to Teacher Education will receive a warning of pending disenrollment letter. Students who are warned of pending disenrollment should meet with the program coordinator and determine if program completion is an option.

Students must submit passing scores on PRAXIS I. If all three areas (reading, writing, math) have not been passed, the student may appeal for conditional acceptance.

Application to Student Teaching If a candidate's application to a teacher education program is approved, the candidate completes a sequence of professional education courses and applies during the junior year to intern as a student teacher senior year. The candidate submits his/her portfolio and application to student teach to the Program Coordinator. The application lists the current set of criteria that permit a candidate to qualify for student teaching. Included among the criteria are a record of strong academic performance in program and University courses, recommendations from education faculty, and evidence of superior course work and passing scores on PRAXIS I as determined for Vermont, and also passing scores on PRAXIS II if required for the specific endorsement. Once admitted to student teaching, the student must successfully complete the interview process and be accepted by an approved public school teacher/administrator before being placed for student teaching. After placement, the student will carry out an internship under the guidance of an approved cooperating teacher and department supervisor. Student teachers will be placed in Professional Development Schools or Partnership Schools. Although many students remain in the Burlington area, not all can be placed close to campus. Effort is made to accommodate student preference regarding placement site and the semester during which student teaching will occur. All students should be prepared to student teach in either the fall or spring semester of their senior year. Candidates must meet specific requirements to be recommended for licensure. These requirements are available in the Office of Student Services, 528 Waterman.

Note: Students who are not admitted to student teaching may appeal through the College Student Affairs Committee.

Application for Licensure Students who successfully complete a Teacher Education program are eligible to apply for licensure. The Licensing Newsletter which explains this process is available in 528 Waterman as well as on the web at www.uvm.edu/~cess/stservices. Applications for licensure are available in 528 and from the Vermont State Department of Education (802-828-2445).

Teacher Assessment–PRAXIS Undergraduate Students: Students are required to submit passing scores for PRAXIS I (refer to chart) as part of their application to the professional portion of their Teacher Education program. If all three areas have not been passed, the student may appeal for conditional acceptance. Passing scores must be received by the program for all three content areas of PRAXIS I before the student is eligible for a teaching internship placement.

Teaching endorsements as listed on the chart require passing scores on PRAXIS II. Science endorsements require passing scores on both General Science as well as the specific area (e.g. Chemistry, Biology, etc.). Endorsement areas which have both multiple choice and a constructed response (essay) options require a passing score in one option for PRAXIS II.

Students who are required to complete PRAXIS II for their first endorsement area should note that they may be expected to provide passing scores to be eligible for program completion and graduation.

PBTP and Licensing Masters: Applicants will provide passing scores on PRAXIS I & PRAXIS II (if required for endorsement) before being admitted to the program. Students who receive conditional acceptance must provide passing scores for PRAXIS I & PRAXIS II (if required for endorsement) before being eligible for a teaching internship placement.

AREAS	PRAXIS I
Math	175 [CBT=322]
Reading	177 [CBT=327]
Writing	174 [CBT=322]
	PRAXIS II
Biology	Multiple Choice: 161/Essay: 150
Chemistry	Multiple Choice: 150/Essay: 150
Earth Science	Multiple Choice: 158/Essay may be added.
Elementary	Multiple Choice: 148/Essay may be added.
English	Multiple Choice: 172/Essay: 160
General Science	Multiple Choice: 157/Essay may be added.
Mathematics	Multiple Choice: 141/Proofs, Models, & Problems, Part I: 154
Social Studies	Multiple Choice: 162/Essay: 165

1999-2000 Teacher Examination Pass Rate: 100%.

Testing Requirements for Educator Licensing Brochure - http://www.state.vt.us/educ/new/html/maincert.html

Teacher Education/Art Education (Kindergarten through Twelve)

The program in Art Education qualifies candidates to teach art in grades K through 12. Students fulfill course requirements in general education, professional art education, professional education courses, studio art, art history, and related subjects. Graduates satisfy College of Education and Social Services requirements for teacher licensure and partake in coursework in the Art Department in the College of Arts and Sciences. The program allows sufficient additional advanced courses as recommended by the Art Department for admission to graduate school.

Students must be enrolled in the College of Education and Social Services. Those admitted as first-year students or sophomores to the Art Education Program are considered Candidates in the Program. Admission as Majors is made at the beginning of the junior year following formal review procedures during the second semester of the sophomore year.

A typical, but not all-inclusive, program outline follows:

FIRST YEAR	Fall	Spr
Studio Art Foundation	3	3
Art History	3	3
HDFS 005–Human Development	3	–
EDSP 005–Iss. Affecting Persons with Disabilities	–	3
Race & Culture	–	1
Gen. Ed.; Electives	6	6

SOPHOMORE YEAR	Fall	Spr
Studio Art Foundation	3	–
Art History Elective	3	–
Studio Art	3	6
PEAC	1	1
Gen. Ed.; Electives	6	9

Students apply to the Art Education Major during second semester of sophomore year. Students must be accepted in order to enroll in required methods courses.

JUNIOR YEAR	Fall	Spr

ACADEMIC MAJORS

Requirements for majors are listed at http://www.uvm.edu/~cess/stservices/?Page=requirements.html

Major Concentrations

(Early Childhood, Elementary, Family and Consumer Sciences, and Physical Education)

Animal Sciences
Anthropology
Biological Science
Chemistry
Classical Civilization
Communication
Communication Sciences
Earth Science
English
Environmental Studies
Exercise and Sport Science
French
Geography
German
Greek
Health
History
Human Development and Family Studies
Individually Designed Interdisciplinary (IDIMC)*
Latin
Mathematics
Music
Nutrition and Food Sciences
Physical Science
Physics
Psychology
Psychology and Comm. Sciences
Religion
Sociology
Spanish
Studies in
- Cultural Diversity
- – Africa
- – East Asia
- – Latin America
- – Middle East

Theatre

Majors

(Secondary Education)

Animal Science**
Biological Science
Chemistry
Earth Science
English
Environmental Studies***
French
Geography
German
History
Latin
Mathematics
Physics
Spanish

Minors

(Secondary Education)

Anthropology
Coaching
Economics
English
Environmental Studies***
French
Geography
German
History
Latin
Mathematics
Political Science
Psychology
Russian
Sociology
Spanish
Special Education****

Broadfield Majors

(Secondary Education)

Anthropology
Biological Sciences
Economics
Geography
History
Physical Science
Political Science
Sociology

*All students enrolled in the Middle Level program must complete the IDIMC).

**Animal Sciences is an aternate route for Biology endorsement.

***Environmental Studies is not a Vermont State Department approved endorsement area. Students in Secondary Education who select Environmental Studies will need a second 30-hour major from the above list of majors in order to be eligible for a Vermont Teacher's license and their first content endorsement. Students who are completing a minor in Environmental Studies will not be eligible for a second endorsement in this area.

****Does not lead to second endorsement without internship

EDAR 177–Curriculum & Pract. in Elem. Art	4	–
EDAR 178–Curriculum & Pract. in Middle/HS Art	4	–
EDAR 284–Current Issues in Art & Ed.	–	3
EDSC 215–Rdg. in Sec. Schools or other approved reading course	–	3
Studio Art	6	6
Gen. Ed.; Electives	3	3

SENIOR YEAR	Fall	Spr
EDFS 203–Soc., Hist. & Phil. Found. of Ed.	3	–
EDSC 226–Teaching Internship	–	12
EDAR 283–Current Issues in Art & Ed.	–	3
Studio Art	6	–
Gen. Ed.; Electives	6	–

Students must meet with their advisors and get approval to set up student teaching and accompanying courses prior to enrolling in student teaching.

A minimum of 124 approved semester hours is required for the degree including three semester hours of teaching reading for teacher licensure.

Students are responsible for obtaining information regarding teacher licensure and degree requirements from the Office of Student Services, 528 Waterman.

Refer to Requirements for Teacher Preparation Programs presented earlier in this section.

Teacher Education/Early Childhood Education (Early Childhood Education PreK-3)

The program is designed to provide students with the perspectives and skills necessary to work with young children from birth through grade three in inclusionary, developmentally appropriate settings. These include the abilities to: (a) facilitate children's development of literacy, quantification, and inquiry skills; (b) offer instruction in an integrated day format; (c) assess educational progress from a portfolio perspective; (d) use educational materials in an open-ended fashion; and, (e) recognize and respect the diversity of family structures within our society.

The program involves a large field-based component and makes significant use of the Campus Children's Center and elementary schools as practicum sites. Graduates of the program are eligible for licensure from the State of Vermont.

The PreK-3 Professional Preparation Sequence involves three components. The first is a course in Child Development and a course in Family Relations. The child development course introduces students to the concepts that form the practical and theoretical foundation of the program's educational approach. The family relations course provides students a foundation in family dynamics and parent-child relationships and serves to emphasize the important links between children's home and school experiences. These two courses are taken prior to formal admission into the PreK-3 program.

The second component is a three-part professional practices sequence. This sequence provides students a first exposure to the rationale, practices, and procedures used in the provision of developmentally appropriate educational experiences for young children. The sequence includes opportunities for observation and hands-on work with children, opportunities to assist teachers in the provision of developmentally appropriate educational experiences and to discuss with teachers and other professionals the issues surrounding the provision of developmentally appropriate educational experiences.

The professional practices sequence is structured as three course blocks, taken sequentially. The first block course deals with techniques for observing and documenting children's development; the second deals with developmentally appropriate educational practices for children through age six (preschool/kindergarten); and the third for children between the ages of six and eight years (grades one through three). A significant portion of this professional practices sequence takes place in one or more preschools and elementary schools.

The third component is a two-semester student teaching sequence across the birth to eight-year age (preschool through grade three) range. This student teaching experience provides the opportunity to develop, implement, and assess (both in a cooperative and an independent fashion) developmentally appropriate educational practices. One experience would be in the Campus Children's Center and the other would be in a child centered, inclusionary grade K-3 setting.

The course of study consists of 128 credits which are divided into eight categories.

Major concentration in a liberal arts and sciences discipline
General Education courses
Professional Preparation Sequence
Health and Physical Education modules
Race and Culture course
CESS multicultural requirement
Physical Education activities
Electives

(The number of electives depends on the degree of course overlap in the General Education, major concentration, and the multicultural requirements.)

A typical, but not all-inclusive, program outline follows:

FIRST YEAR	Fall	Spr
EDEC 063–Child Development	3	–
EDEC 001–Infant/Toddler Curr. Block	–	4
HDFS 060–Context of Human Development	–	3
Major Concentration	3	3
PEAC	1	–
Race & Culture	–	1
Gen. Ed.; Electives	9	6

SOPHOMORE YEAR	Fall	Spr
EDEC 100–Preschool Curriculum Block	10	–
EDEC 189–Early Childhood Practices	–	12
EDPE 197–Issues in Health Education or PEAC 021–Walking for Fitness	1	–
Major Concentration	3	3
PEAC	–	1
Gen. Ed.; Electives	3	–

JUNIOR YEAR	Fall	Spr
EDSP 005–Issues Affecting Persons with Disabilities	–	3
EDEL 156–Teaching Math for Meaning	3	–
EDEL 176–Language Arts & Literacy Skills	–	2
EDEL 177–Children's Lit & Literacy	–	2
EDEC 296–Field Experience (Literacy)	–	3
Major Concentration	6	3
Gen. Ed.; Electives	9	3

SENIOR YEAR	Fall	Spr

EDEC 187–Field Practicum	–	12
EDEL 187–Planning, Adapting and Delivering Reading Instruction	–	3
Major Concentration	9	–
Gen. Ed.; Electives	6	–

Refer to Requirements for Teacher Preparation Programs presented earlier in this section.

Teacher Education/Elementary Education (Kindergarten through Six)

The elementary education program prepares teachers for assignments in grades kindergarten through six. The Bachelor of Science in Education is awarded upon satisfactory completion of the approved program which includes a planned sequence of professional courses, field experiences, and a full-semester internship experience.

The Elementary Education Program is a designed sequence of professional course work that achieves coherence from its theme "teaching all children strategically in diverse communities." Embedded in a state known for its progressive schooling traditions, Elementary Education students have ample opportunity to learn about and practice the art and science of teaching. Through a web of unique relationships with area schools, Elementary Education majors build friendships with a diverse variety of children by the second year of their professional program. Several features distinguish the program:

Blocked Professional Course Work Grounded in a theoretical orientation that seeks to limit the necessity for piecemeal education, faculty of the program have designed course work that fits together in naturally occurring curricular blocks: literacy (reading/writing, children's literature, mathematics), inquiry (social education, science, visual and performing arts), and the professional internship (student teaching, classroom management, and portfolio development).

Integrated Fieldwork Professed theory about teaching is constantly exposed to the reality of public school practice. Each curriculum block has field experience attached to it. Students are thus placed in situations where theory and practice reside in reciprocal tension.

Authentic Assessment The State of Vermont requires a results-oriented demonstration of teaching competence to qualify for the teaching license. The Elementary faculty have built in portfolio driven authentic assessments at every step of the professional program. Interns thus learn the portfolio process from the inside out and are able to apply it to themselves while learning to apply it within their public school classes.

Full Inclusion The State of Vermont has the highest rate of inclusion of learners with special challenges in the regular classroom setting. Being educated at UVM means elementary education students learn about and practice the application of instructional adaptations for learners of exceptional need.

Elementary Education Curriculum The elementary education curriculum includes a general education component of 60 credits from the academic areas outlined earlier. Included in the 60 hours must be two semester hours of physical education activities. Students are required to complete an approved major concentration, consisting of at least 30 hours of study in a liberal arts and sciences discipline. Specific information may be obtained from advisors or from the Office of Student Services, 528 Waterman. In addition to the major concentration and professional education requirements, certain courses are recommended to meet specific state and national requirements in elementary education.

Full-time students enroll in 12 to 18 credits. Elementary education students enroll in the required education courses each semester, along with several additional required courses.

A typical, but not all-inclusive, program outline follows:

FIRST YEAR	Fall		Spr
EDEL 010–Intro to Teaching & Learning	1		1
EDEL 011–Computers in El. Ed. Classroom	3	or	3
EDEL 024–Learners and Learning Process	3	or	3
Major Concentration	3		6
PEAC	1	or	1
Diversity	1-3	or	1-3
Gen. Ed.; Electives	6		6

SOPHOMORE YEAR	Fall		Spr
*EDEL 056–Teachers & the Teaching Process	3	or	3
*EDEL 178–Meeting Indiv. Needs: Assessment & Insruction	2	or	2
*EDSP 005–Issues Affecting Persons With Disabilities	3	or	3
EDPE 197–Issues in Health Education	1	or	1
EDPE 100–Integrating Movement Across the Elementary School Curriculum	2	or	2
Major Concentration	3		6
PEAC	1	or	1
Gen. Ed.; Electives	6		6

During the sophomore year, students must complete an Application to Teacher Education form available in 533 Waterman Building. Students will follow requirements specified in the Application to Teacher Education. Students will not be permitted to enroll in advanced education courses until they have been accepted to teacher education. The advanced courses include:

JUNIOR YEAR	Fall		Spr
**EDEL 155–Lab Experience in Inquiry	3	or	3
**EDEL 157–Social Ed. & Social Studies	2	or	2
**EDEL 158–Teaching Science for Meaning	2	or	2
**EDEL 159–Visual & Performing Arts, K-6	2	or	2
***EDEL 156–Teaching Math for Meaning	3	or	3
***EDEL 175–Lab Experience in Literacy	3	or	3
***EDEL 176–Language Arts & Literacy Skills	2	or	2
***EDEL 177–Children's Lit. & Literacy	2	or	2
****EDEL 187–Planning, Adapting and Delivering Reading Instruction	3	or	3
Major Concentration	3		3
Gen. Ed.; Electives	3		3

Students are required to complete a student teaching internship application in their junior year before being assigned a placement as seniors. Students will be notified by the Professional Education Office of a general meeting and are expected to attend to initiate this process. Students will follow requirements specified in the Application to Student Teaching. The course work for this stage of the program follows.

SENIOR YEAR	Fall		Spr
*****EDEL 185–Student Teaching Internship	12	or	12
*****EDEL 188–Principles of Classroom Management	2	or	2
*****EDEL 189–Portfolio Development & Reflective Practice	1	or	1
EDFS 203–Social, Hist. & Phil.			

Foundations of Education	3	or	3
Major Concentration	6	or	6
Gen. Ed.; Electives	6	or	6

A minimum of 127 approved credit hours is required for the degree.

* Courses taken concurrently
** Courses taken concurrently
*** Courses taken concurrently
**** EDEL 187 must be taken after completion of the Literacy Block and prior to student teaching
***** Courses taken concurrently

Refer to Requirements for Teacher Preparation Programs presented earlier in this section.

Teacher Education (Seven through Twelve) Family and Consumer Sciences Education Program

The Family and Consumer Sciences Education Program is an interdisciplinary program that includes a sequence of courses in family, personal, and consumer issues: food and nutrition, consumer management, human development, and housing. The variety of courses taken for the major expands career possibilities.

Because of the interdisciplinary and comprehensive scope of Family and Consumer Sciences Education, graduates with this major have a variety of career alternatives in business, social agencies, and different types of educational programs for youth and adults. Graduates are licensed to teach in public schools in Family and Consumer Sciences fields such as family studies, child development, consumer education, food and nutrition, housing and interiors, and resource management found in middle, junior, and high school programs.

A typical, but not all-inclusive, program outline follows:

FIRST YEAR	Fall	Spr
NFS 043–Fund of Nutrition	3	_
HDFS Elective	3	3
NFS 053/054 Basic Concepts of Foods	_	4
Major Concentration	_	3
PEAC	1	_
Race and Culture	_	1
Gen Ed.; Electives	9	6

SOPHOMORE YEAR	Fall	Spr
CDAE Elective	3	_
CDAE Design	_	3
HDFS Elective	_	3
EDFC 123 Meth in Nutrition Educ	3	_
NFS 143 Nutrition in the Life Cycle	3	_
EDSP 005 Iss Affecting Pers w/Disabilities	3	_
Major Concentration	_	3
PEAC	1	_
Gen Ed.; Electives	3	6

JUNIOR YEAR	Fall	Spr
EDSC 215	3	_
EDFC 220 Observ & Part in Public Schls	3	_
EDFC 221 Mgmt of Schl Youth Org	_	2
Housing Requirement	3	_
Major Concentration	6	9
Gen. Ed.; Electives	_	5

SENIOR YEAR	Fall	Spr
EDFC 222 Curr Dev in Human Sci.	_	3
EDFC 224 Eval Tech in Human Sci.	_	3
EDFC 225 Teaching Practicum	12	_
Major Concentration	_	9

Teacher Education / Middle Level Education (Five through Eight)

The organizing theme of the Program is "Education for High Achievement and Personal Efficacy." The Program provides a minimum of four supervised internships whereby university students participate in the most highly successful middle level school programs that are within reasonable commuting distance.

Students who satisfactorily complete the program earn a minimum of 127 credit hours of study across three areas: General Education, Academic Concentration, and Professional Studies. This design ensures that each student achieves a balance of academic and professional preparation to meet the expectations and challenges associated with teaching at any level. During the students' first year they enroll in a required two semester advising course, EDML 10 "Introduction to Teaching," where faculty guide them in devising an eight semester plan that is balanced across three areas of study. Those three areas are briefly described below.

General Education Students earn at least 39 credits in liberal arts and sciences from an array of disciplines such as: English, Mathematics, Social Science, History, Political Science, Humanities, Diversity, Art and Physical Education. Six credits are designated as Electives. Most of these courses are generally completed during the first three to four semesters, and since students sometimes transfer from one program to another, these credits easily transfer to other degree programs in the College of Education and Social Services as well as other colleges within the University.

Academic Concentration Every UVM student chooses an academic major referred to as a "major concentration." Students enrolled in the Middle Level Program organize their concentration around two disciplines in order to accomplish the middle level licensure requirement for two teaching areas. This design is referred to as an IDIMC (Individually Designed Interdisciplinary Major Concentration), and it consists of 18 credits in each of two disciplines for a total of 36 credits. For example, one student might choose to combine Science and Art while another decides on Mathematics and Social Studies. These academic combinations enable a student to teach in multiple areas as a member of a middle level team consisting of two to five or more teachers. Program advisors and students work closely together, especially over the first two years, to design an IDIMC that accommodates the student's interests and fits the needs of middle level teachers.

Professional Studies Courses that concentrate on the professional work of teaching, span all four years. These studies are grounded in theory, research and policies associated with the very best practices in middle level education. Studies of young adolescent learning and development, teachers and teaching, literature for young adult readers, special education and technology are taken in the first two years as Pre-Professional Requirements. These courses include a minimum of one field placement with a middle level team of teachers. More heavily field-linked courses in curriculum, pedagogy, assessment, team organization, literacy, mathematics, and evaluation and assessment are taken the last two years. Required professional courses over four years total of 52 credits.

Fieldwork The faculty is committed to providing students as much field experience as possible and practical. Four courses (EDML 56, 160, 170, 185) are primarily field-based, and in the course of taking these courses students will enjoy working with teachers on four different teaching teams. Emphasis is placed on high levels of integration between campus-based learnings and field experience to insure that students are

sufficiently oriented and prepared for the real work of exemplary middle level schools.

Cohort Cooperation and collaboration among teachers is a hallmark of middle level teaching teams. That same spirit is given emphasis through building a cohort of middle level teacher education students who receive group advising, who take courses together, and who participate in professional activities such as school events and professional conferences. Additionally, the Middle Level Teacher Education Program includes a Teacher Advisory Committee composed of exemplary middle level teachers from area schools who consult with students and faculty about the Program, field placements, job searches and other issues related to advancing one's professional development and beginning career.

Professional Portfolio In the aforementioned EDML 10 course, students are introduced to the process of documenting and preserving samples of their professional work and development. These samples are maintained in individual portfolios that grow cumulatively semester by semester. A final Professional Portfolio is assembled during the student teaching semester to more fully define the professional background and aspirations of the novice teacher. These final portfolios constitute completion of the Program, and they are valuable to seniors reflecting on their preparation and accomplishments as well as beginning a job search. These full portfolios are drawn upon to create a more succinct "presentation portfolio" for use in interviews. Seniors also receive faculty guidance in creating resumes and applying and interviewing for teaching positions. The demand for teachers well prepared for teaching middle level schools is such that the portfolio is an excellent and comprehensive way to present one's candidacy.

A typical, but not all-inclusive, program outline follows:

FIRST YEAR	Fall	Spr
EDML 010-Introduction to Teaching	1	1
EDML 024-Learners, Development & Learning	3	–
EDEL 011- Computers in El. Ed. Classroom	–	3
IDIMC	–	6
PEAC	1	1
Diversity	1	–
Gen. Ed.; Electives	9	6

SOPHOMORE YEAR	Fall	Spr
EDML 056-Teachers & the Teaching Process	3	–
EDSP 005- Issues Affecting Persons w/Disabilities	3	
EDEL 177-Children's Lit. & Literacy	2	
IDIMC	6	6
Gen. Ed.; Electives	3	9

JUNIOR YEAR	Fall	Spr
EDML 160-Teaching Young Adolescents	6	–
EDML 161-Teaching Practicum I	3	–
EDML 170-Middle School Organiz. & Pedagogy	–	6
EDML 171-Teaching Practicum II	–	3
IDIMC	6	6
Gen. Ed.; Electives	3	3

SENIOR YEAR	Fall	Spr
EDML 185-Student Teaching Internship	–	12
EDML 186-Internship Support Seminar	–	1
EDML 187-Literacy & Mathematics	3	–
EDFS 203- Soc, Hist. & Phil. Found. of Ed.	3	–
IDIMC	6	–
Gen. Ed.; Electives	3	–

Refer to Requirements for Teacher Preparation Programs presented earlier in this section.

Teacher Education/Music Education (Kindergarten through Twelve)

The curriculum in music education leading to the degree of Bachelor of Science in Music Education is recommended to students who have sufficient training and natural musical ability to justify a career in music. Prospective students must audition before entering the program. Those admitted as first-year students or sophomores to the Music Education program are considered *Candidates* in the program. Admission as a *Major* is made at the beginning of the junior year following formal review procedures during the second semester of the sophomore year. Graduates are qualified for positions as instructors and supervisors of music in public schools.

A typical, but not all-inclusive, program outline follows:

FIRST YEAR	Fall	Spr
HDFS 005–Human Dev. or EDEC 063–Child Dev.	3	–
EDSP 005–Issues Affecting Persons w/Disabilities	–	3
MUS 005–Piano Lab 1	1	–
MUS 031–Basic Musicianship	3	–
MUS Pedagogy	1	1
MUS 151–Private Lessons	2	–
Ensemble	1	1
MUS 006-Piano Lab I	–	1
MUS 032–Basic Musicianship	–	3
MUS 152–Private Lessons	–	2
PEAC	1	1
Race & Culture	–	1
Gen. Ed.; Electives	6	3

SOPHOMORE YEAR	Fall	Spr
MUS 007–Piano Lab 2	1	–
MUS 011–Survey of Western Music	3	–
MUS Pedagogy	1	1
MUS 131–Intermed. Theory: Music of Tonal Era	3	–
MUS 133–Intermediate Theory Lab	1	–
MUS 153–Private Lessons	2	–
Ensemble	1	1
MUS 281–Elem. Music Ed. Methods	3	–
MUS 008–Piano Lab II	–	1
MUS 012–Survey of Western Music	–	3
MUS 132–Intermediate Theory: Music of Tonal Era	–	3
Music 134–Intermediate Theory Lab	–	1
MUS 154–Private Lessons	–	2
MUS 259–Conducting	–	3

Students apply to the Music Education major during the second semester of their sophomore year.

JUNIOR YEAR	Fall	Spr
Ensemble	1	1
MUS 231–Adv. Theory: 20th Century Music	3	–
MUS 233–Arranging	3	–
MUS 251–Private Lessons	2	–
MUS Pedagogy	2	2

MUS 252–Private Lessons	–	2
MUS 282–Sec. Music. Ed. Methods	–	3
EDSC 215–Reading In Secondary Schools	–	3
MUS 259–Conducting	–	3
Gen. Ed.; Electives	6	3

Students are required to complete a student teaching internship application before being assigned a placement.

SENIOR YEAR	Fall	Spr
Ensemble	1	–
MUS 256–Perform Study: Senior Recital	2	–
EDFS 203–Soc., Hist., & Phil. Found. of Ed.	3	–
MUS Pedagogy	1	–
MUS 041–Basic Electronic Music	–	3
EDSC 226–Teaching Internship	–	12
MUS 253–Private Lessons	–	2
Gen. Ed.; Electives	9	–

A minimum of 124 approved semester hours is required for the degree including three semester hours of teaching reading for teaching licensure. Students must pass the piano proficiency examination prior to student teaching. Students are responsible for obtaining information regarding teaching licensure and degree requirements from the Office of Student Services, 528 Waterman.

Pedagogy classes are taken as available.

Refer to Requirements for Teacher Preparation Programs presented earlier in this section.

Teacher Education/Physical Education (Kindergarten through Twelve)

The Physical Education Program qualifies candidates for licensure to teach in grades K-12. Course work around the program theme, Moving and Learning, includes a series of courses designed to provide a background to the field of physical education. Specialty courses assist the student in the development of physical education program content and teaching skills important in providing developmentally appropriate programs of physical education to children and youth in today's schools. Laboratory experiences in schools throughout the program aid students in recognizing the relationship between theory and practice.

Courses in general education and professional education as well as a liberal arts and sciences major/major concentration are also required. A major concentration in Exercise and Sport Science is available to students in the Physical Education program.

A typical but not all-inclusive program outline follows:

FIRST YEAR	Fall	Spr
EDPE 021–Foundations of Phys. Ed.	3	–
EDPE 157–Care & Prevent Athletic Injury	–	3
PEAC 125–Team Sports 1	1	–
PEAC 050–Individual Sports	1	–
PEAC 126–Team Sports 2	–	1
PEAC 070–Racquet Sports	–	1
EDHE 046–Personal Health	3	–
Major Concentration	3	6
Gen. Ed.; Electives	6	6

STUDENTS MUST DEMONSTRATE COMPETENCY IN SWIMMING

SOPHOMORE YEAR	Fall	Spr
EDPE 023–ARC Emergency Response*	3	–
HDFS 005–Human Development	3	–
EDPE 104–Phys. Ed. Teaching Experience	–	5
PEAC 016–Gymnastics	1	–
PEAC 028–Conditioning	1	–
PEAC 190–Dance	–	1
PEAC 105–Outdoor Recreation	–	1
Major Concentration	6	6
Race & Culture	–	1
ANPS 019–Hum. Anatomy & Physiology	4	–
ANPS 020–Hum. Anatomy & Physiology	–	4

*or evidence of American Red Cross Basic Emergency Response certification

JUNIOR YEAR	Fall	Spr
EDPE 105–Phys. Ed. Teaching Exper.	5	–
EDPE 167–Exercise Physiology	3	–
EDPE 220–Sport in Society	3	–
EDPE 260–Adapted Physical Activity	3	–
EDPE 155–Phys. Ed. in Secondary Schools	–	3
EDPE 166–Kinesiology	–	3
EDPE 240–Motor Skill Learning & Control	–	3
Major Concentration	–	3
Gen. Ed.; Electives	3	3

Students are required to complete a student teaching application before being assigned a placement.

SENIOR YEAR	Fall	Spr
EDSC 215–Reading in Secondary Schools	3	–
EDFS 203–Soc., Hist., & Phil. Found. of Ed. or EDFS Elective	3	–
EDPE 181–Student Teaching	–	12
EDPE 182–Student Teacher Seminar	–	2
Major Concentration	6	–
Gen. Ed.; Electives	3	–

Refer to Requirements for Teacher Preparation Programs presented earlier in this section.

Athletic Training Concentration An Athletic Training concentration is offered in physical education and is approved by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). Upon completion of the concentration and 800 clinical experience hours, students are eligible to sit for the National Athletic Trainers' Association Board of Certification (NATABOC) national examination.

Certified athletic trainers are highly trained health professionals qualified to work in a number of settings on the health problems of active individuals. Working closely with physicians and other allied health professionals, their work includes the prevention, recognition, and immediate treatment and rehabilitation of injuries related to active participation.

Admission to the program is granted upon successful completion of 60 hours of directed observation, preadmission course work, overall GPA, and an interview with the program faculty. Students are required to submit a formal application to the program director. Accreditation standards limit the number of students accepted each year. Students must be enrolled in a degree program at UVM to be eligible for enrollment in the Athletic Training concentration. It is often combined with the Teacher Education/Physical Education program. For more information, call (802) 656-4456.

Advanced Placement Admission Students who transfer to the University of Vermont often have command of the entry-level competencies required for admittance into the Athletic Training EducationProgram (ATEP). As more students are transferring to UVM with prior athletic training academic experience, an avenue for Advanced Placement into the ATEP is warranted. Students spend numerous hours observing in clinical settings, assisting in high school or college athletic training programs and have taken basic athletic training courses. It is therefore appropriate for the students who demonstrate prior athletic training experience

and competency proficiency be considered for Advanced Placement in the ATEP.

Advanced placement candidates may apply during the Fall semester for Spring enrollment, or during the Spring for enrollment the following Fall. If an Advanced Placement candidate is not admitted, they will have the option to reapply the following semester. All Advanced Placement admissions are based on availability of space in the ATEP.

Application Requirements

I. Complete Advanced Placement Application Form

II. Documented 75 hours of experience with an NATABOC Certified Athletic Trainer (ATC) in a college or high school setting.

III. Documented 50 hours of observation in UVM Athletic Medicine that includes competition and on-site practices.

IV. Successfully complete the following:
   a. EDPE 157–Care and Prevention of Athletic Injuries, minimum grade of B (3.0/4.0 scale) or an official transcript documenting successful completion of a basic athletic training course that included comparable educational competencies.
   b. EDPE 158–Directed Observation or proficiency in Level I psychomotor competencies.
   c. Current first aid, adult CPR, and AED certifications.

V. Successful interview with the Program Director and UVM Athletic Medicine certified athletic trainers.

VI. Minimum GPA of 2.5.

VII. Two letters of recommendation:
   a. Above ATC supervisor.
   b. Academic professor.

Secondary Education (Seven through Twelve)

The Secondary Education Program prepares teachers to work with students with diverse needs in public school classrooms in grades 7–12. The curriculum includes general education; a major, a minor, or a broadfield major; a professional education component; and electives (see specifics). A minimum of 124 approved semester hours is required for the degree. Specific requirements, including PRAXIS information, as approved by the State Department of Education, may be obtained from the Office of Student Services, 528 Waterman. Program information is also available from the Secondary Education Program, 405A Waterman or on the web (http://www.uvm.edu/~cess/stservices/sec.html). During the first two years, students concentrate on completing their general education, major, and minor requirements while also taking selected coursework in education. The majority of professional education coursework is completed in the junior and senior years.

General Education Component (Minimum of 27 credits) The general education courses must include the following courses. Two semester hours of physical education activities must be included.

English Composition and English Literature
Science
Mathematics
U.S. History
American Government
Psychology 1
Humanities (Philosophy, Religion, Foreign Language)
Physical Education activities
Race and Culture

Academic Major and Minor Components (Major minimum of 30 credits, minor minimum of 18 credits or broadfield major of 48-52 credits). Students who successfully complete their Teacher Education programs are recommended for licensure with a first endorsement in their major, and may apply directly to the State Department of Education for an endorsement to also teach their minor. Students are therefore encouraged to select a minor which is also a licensure area. (Approved majors and minors are listed in the Academic Majors box appearing earlier in this section.)

Professional Education Component (42 credits) By the time students begin the professional education component of their program as juniors, they should have completed most of their general education requirements and be well into their academic major (15-18 credits completed) and their academic minor (six-12 credits completed). Students need to plan to complete the remainder of their requirements as they complete the following phases of the professional education component:

I. Exploring Learners' Needs in the Context of Schools: EDFS 203, EDSC 207, 209.

Following completion of this first phase, students must submit their Initial Portfolio and their application to the Teacher Education Program. The Initial Portfolio documents learning, professional knowledge, colleagueship, advocacy and accountability. Provided the Initial Portfolio is assessed as satisfactory, the student has achieved passing scores on PRAXIS I, has a minimum 2.5 GPA overall, 2.5 in his or her major, and was successful in EDFS 203, EDSC 207 and 209 (3.0 or better), the student is accepted into Teacher Education and may begin work on the second phase of the program.

II. Designing and Adapting Instruction: EDSC 215, 216 and subject methods.

Subject methods for major: EDSC 225 (Social Studies), EDSC 227 (Science), EDSC 240 (English), EDSC 257 (Mathematics), or EDSC 259 (Foreign Languages).

During the spring semester prior to the academic year in which students plan to student teach, they must submit an application for student teaching placement. All students seeking a student teaching placement must achieve passing scores on PRAXIS II. Internship Portfolios may again be submitted to document work toward achievement of Standards for Vermont Educators. Students must have an overall GPA of 3.0, and a minimum GPA of 2.75 in their major prior to student teaching. Following a successful faculty review of a student's records, he or she is nominated for a placement. Students must complete the interview process and be approved for placement by the school in order to be confirmed for student teaching. Students complete a semester of full-time student teaching as the third phase of the program. (In some cases, students must arrange to live off-campus during the student teaching semester.)

III. Achieving Results in Schools: EDSC 226, 230.

As students complete their degree program, they must submit their Licensure Portfolios which document Learning, Professional Knowledge, Colleagueship, Advocacy and Accountability. Recommendation for licensure is based on successful completion of student teaching, an overall grade-point average of 3.0, as well as on submission of a satisfactory Licensure Portfolio.

Information about application and assignment procedures for the Secondary Education Program may be obtained from 405A Waterman Building. **Students are responsible for obtaining information regarding the process and requirements, and for notifying the office as to changes in their status, address, or intentions for completion of their program.**

Electives All students in the College of Education and Social

Services are required to enroll in an education course both semesters of their first year. Students need to plan to supplement these education electives with additional electives from the College of Education and Social Services or from other colleges, schools, and departments within the University as needed to complete 124 credit hours prior to graduation.

A typical, but not all-inclusive, program outline follows:

FIRST YEAR	Fall	Spr
EDSC 050-Exploring Education	3	–
Major	3	6
Minor	3	–
PEAC	–	1
Race & Culture	1	–
EDSP 005	–	3
Gen. Ed.	6	6

SOPHOMORE YEAR	Fall	Spr
Major	3	6
Minor	–	6
PEAC	1	–
EDSC 011	3	–
EDSC 197 (or other field based elective)	–	3
Gen. Ed.	9	3

JUNIOR YEAR	Fall	Spr
EDSC 207-Adoles. Learning from a Behavioral & Cognitive Perspective	3	–
EDSC 209-Practicum in Teaching	3	–
EDFS 203-Soc. , Hist. &Phil. Found. of Ed.	3	–
EDSC 215-Reading in Secondary Schools	–	3
EDSC 216-General Methods for Sec. Teachers	–	3
Special Methods	–	3
Major	6	6
Minor	–	3

SENIOR YEAR	Fall		Spr
EDSC 226-Teaching Internship	12	or	12
EDSC 230-Teaching for Results	3	or	3
Minor	6	or	6
Gen. Ed.; Electives	4	or	4

Language Proficiency

A Language Proficiency Test is required for the Secondary Education Foreign Language majors.

Speech/Theatre: All students must demonstrate competence in the area of speaking by taking a speech or theatre course or by submitting evidence of competence (go to 405A Waterman for more information).

Postbaccalaureate Teacher Preparation Program

The Postbaccalaureate Teacher Preparation Program is designed for individuals who have a bachelor's degree from an accredited four-year institution and who want to become licensed to teach in Vermont. The basic program fulfills the professional education requirements for state licensure. Areas and levels of licensure include: Grades K-12 — Art, Music, Physical Education; Grades K-6 (elementary) — general Elementary Education, Grades 7-12 (secondary) English, Foreign Language, Mathematics, Science (Animal Sciences*, Biological Science, Chemistry, Earth Science, and Physics), Social Studies (Anthropology, Economics, Geography, History, Political Science, and Sociology).

*Animal Sciences is an alternate route for Biology Endorsement.

Applicants to the Postbaccalaureate (Postbac) Teacher Preparation Program must meet the following entrance criteria:

1. Hold a bachelor's degree from an accredited institution of higher education.
2. Possess a general education background based on those studies known as liberal arts which embrace the broad areas of social and behavioral sciences, mathematics, biological and physical sciences, the humanities, and the arts.
3. Demonstrate a commitment to the teaching profession.
4. Have a minimum overall GPA of 2.5 in undergraduate course work.
5. For elementary candidates: Previous coursework must include 30 semester hours in a single liberal arts discipline.
6. For middle level candidates: Previous coursework must include two approved areas of concentration, with 18 credits in each.
7. For secondary candidates: Previous coursework must include a minimum of 30 semester hours with a minimum GPA of 2.75 in one of the academic areas listed below to meet Vermont state licensure requirements for the major academic concentration.

   Secondary Education also has a master's degree option. See the Graduate College catalogue for further information.

   Majors: Biological Science, Chemistry, Earth Science, English, French, Geography, German, History, Latin, Mathematics, Physics, Spanish.

   Broad Field Majors: Anthropology, Biological Science, Economics, Geography, History, Physical Science, Political Science, and Sociology.

Applications for qualified applicants are reviewed on an on-going basis. Acceptance to begin in a given semester is based on availability of courses and placements at field sites. Requests for further information about the PBTP Program and application forms may be obtained by contacting the PBTP Coordinator, Department of Secondary Education, 405A Waterman Building.

Accelerated Licensure Master of Education Program for Secondary Education

UVM students who are in their third year of study for the bachelor's degree may apply to the Accelerated Licensure Master of Education program. Requests for further information and application forms may be obtained by contacting the Secondary Education Program Coordinator, 405A Waterman Building, (802) 656-1411. Refer also to the Graduate College catalogue.

Cross-College Minor

Human Development and Family Studies. This minor cannot be the sole minor for sociology or psychology majors but is acceptable as a second minor, especially for persons interested in careers involving work with families and youth.

Minor in Special Education

The minor in special education is for students wishing to learn about and work with students with disabilities and to obtain an understanding of special education. Students apply to the minor through contacting the Special Education Program in the Department of Education. A total of 18 hours (6 courses) of coursework is required, at least 9 hours of which must be at the 100 level or above.

Course offerings cover the areas of foundations of special education, assessment practices, and methods for supporting students with disabilities in general education classrooms.

Students may apply their coursework to becoming certified in special education.

The College of Engineering and Mathematics

The College offers stimulating, professionally-oriented programs for students interested in careers in computer science, engineering, and mathematics. Computer science develops creative problem-solving ability, along with essential skills in current programming and computing environments. It offers the flexibility to gear studies toward business, science, engineering, mathematics, and the arts. Engineering education combines the study of mathematics and the physical, life, and engineering sciences with application to the analysis and design of equipment, processes, and complete systems. The breadth and flexibility of the engineering programs provide a sound background for engineering practice in public or private domains, for graduate study in engineering and science, and for further professional study in such fields as business, law, or medicine. Engineering management, offered in cooperation with the School of Business Administration, combines a basic education in an engineering discipline with the study of management concepts and techniques. Mathematics and statistics are designed to train students in critical thinking, problem solving, and sound reasoning, while developing a strong level of technical competence and a substantial breadth of exposure to other fields. Bachelor of Science degrees in each of these disciplines provide distinctive recognition based on challenging course work, valuable field experience, and intensive student-faculty interaction.

DEGREE PROGRAMS

The following Bachelor of Science degrees are offered in the College. Various options in each degree are described under the individual degree program.

Civil Engineering
Electrical Engineering
Engineering Management
Mathematics
Mechanical Engineering

The Bachelor of Science degree program may be completed with an approved major in one of the following fields:

Computer Science
Computer Science and Information Systems
Statistics

ACADEMIC STANDARDS

In order to continue as a major in the College of Engineering and Mathematics, a student must achieve a 2.0 cumulative grade-point average at the end of the semester in which 60 cumulative credit hours have been attempted. No more than three repeated course enrollments are allowed during this 60-credit period. In the case of transfer students, applicable transfer credits will be included in determining the 60 credit hours, but grades in these courses will not be included in the grade-point average.

Students who receive a cumulative or semester grade-point average of less than 2.0 will be placed on trial. Students who have failed half their course credits for any semester, or who have had two successive semester averages below 2.0, or three successive semesters in which their cumulative grade-point average falls below 2.0, are eligible for dismissal.

To receive a degree, students must have a minimum cumulative average of 2.0. Students must complete 30 of the last 45 hours of credit in residence at UVM as matriculated students in the College of Engineering and Mathematics. Additional degree requirements are specified for each major.

No more than three grades of D, D+, or D- in the courses normally taken as part of the junior and senior curriculum in the student's major program will be acceptable. Requirements in each department are specified by the respective program curriculum committees.

A course may not be taken for credit if it is a prerequisite to one for which credit has already been granted, except by permission of the student's advisor.

Only two credits of physical education will count toward the total credits needed.

Students must comply with the degree requirements as stated in a single catalogue edition in place during the time they are enrolled. The catalogue edition to be followed is the one in effect at the time the student enrolls at UVM, unless the student requests in writing to follow an edition that is published subsequently during his/her enrollment at UVM. Students may not mix requirements from different catalogues.

First year students: Student who receive a cumulative GPA less than 1.67 after the first year are in danger of not being able to complete a degree in the College of Engineering and Mathematics. These students will be required to reassess their academic direction with the aid of their advisor and the Academic Dean.

MINORS, HONORS THESIS AND CO-OP PROGRAMS

Minor in Computer Science A Computer Science Minor consists of 18 credits in computer science to include 100 or 103, 104, and three additional credits at the 100 level or above. Some Computer Science courses require additional prerequisites.

Minor in Electrical Engineering A minor in Electrical Engineering consists of at least 19 credit hours in Electrical Engineering courses distributed as follows: 3, 81, 4, 82, plus at least nine credit hours numbered above 101. Prerequisite courses for the minor are Math. 21, 22, 121, 271 (or 230) as well as Physics 31, 21, 42, and 22. Each student in the minor program will be assigned an Electrical and Computer Engineering faculty advisor who will assist the student in developing an individualized plan of study. The plan of study of the minor must be approved by the Electrical and Computer Engineering faculty advisor.

Minor in Mathematics

Pure Mathematics: Math 21 (or equivalent), 22, 52 or 121, and nine additional credits in Mathematics courses numbered 100 or above. Computer Science or Computer Engineering majors may substitute Math 54 for 52. The course plan for a mathematics minor must be approved by a mathematics faculty advisor.

Applied Mathematics: Fifteen hours of mathematics courses numbered 52 or higher, including one of 230, 237, 271.

Minor in Statistics A Statistics Minor consists of 15 credits of statistics courses, acquiring calculus knowledge equivalent to Math. 19 or 21, and gaining computer experience equivalent to Statistics 201 or a computer programming course (CS 16 or higher). Not more than seven credits of Statistics 11/51/111/140/141/143/211 may be counted. The course plan for the Statistics Minor must be approved by a Statistics faculty advisor. Contact the Statistics Program Director for complete guidelines.

Honors Thesis Program

The undergraduate thesis program, designed for the superior student with unusual initiative and intellectual curiosity, provides an opportunity to pursue a special program without the restrictions of classroom routine. The honors thesis program consists of reading, research, design, or creation in a curricular area of the student's choice, leading to a written thesis. At the time of graduation, the student's transcript and the graduation program will be appropriately denoted with "Honors Thesis" and the title of the thesis, provided that honor's level performance has been demonstrated.

The student must be matriculated in the College at the time of application for the thesis program and have a cumulative grade-point average of at least 3.0 for sophomore and junior work. The curriculum committee of the area offering the thesis course establishes the mechanics for thesis review and awarding of the grade. The thesis proposal must be approved by the College of Engineering and Mathematics Studies Committee prior to the Add/Drop deadline of the student's first semester or summer session of matriculation into the honor's thesis program. This should allow two semesters or a full summer and one semester of planned effort for the thesis research.

A thesis committee consists of at least three UVM faculty, at least two of whom are from the offering area. The chair of the committee, a permanent UVM faculty member, is also from the offering area. This committee serves to advise the student, approves of the thesis proposal before its submission to the Studies Committee, and approves of the oral defense of the thesis. The course grade is assigned by the committee chair based on consultation with the thesis committee. Six credits of effort are expected for the thesis, normally as three credits each in two semesters. Some programs within the College require senior projects as part of their prescribed curricula. Such projects can provide alternative opportunities to students interested in a design or research challenge.

Cooperative Education Program

A cooperative education (CO-OP) program is offered to students with cumulative grade-point averages placing them in the upper half of their class. Before acceptance, each candidate must be interviewed and approved by the program coordinator and the prospective employer. The program lets students apply their learning to a full-time, paid position in a business, industrial, or government setting.

Computer Science Curricula

Students may select either of three degree programs in Computer Science. ***The Bachelor of Science degree, with a major in Computer Science***, and the ***Bachelor of Science degree, with a major in Computer Science and Information Systems***, are offered through the College of Engineering and Mathematics and are described below. Additionally, a ***Bachelor of Arts degree, with a major in Computer Science***, is offered through the College of Arts and Sciences. A non-degree ***Certificate*** and an ***Accelerated Masters'*** program are also available.

Certificate in Computer Software: A non-degree certificate in Computer Software is offered jointly with the Division of Continuing Education. Requirements for the Certificate are 15 credits in approved computer software courses, to include CS21 with a grade of C or better in each.

Bachelor of Arts, Computer Science Major: Requirements for this degree are described under the College of Arts and Sciences section of this catalogue.

Accelerated B.S./M.S. Program: A five-year combined Bachelor of Science plus Master of Science in Computer Science program is available. Consult the Graduate Catalogue for details.

Bachelor of Science, Computer Science Major: A minimum of 124 credits (122, if the student is exempt from PEAC) are required as follows:

• Computer Science: 21, 26, 100, 101, 103, 104, 201, 224 or 243, 292, plus 15 additional credits (five courses) of 200-level courses (not more than three credits of which may be independent study);

• Mathematics: 21, 22, 54, two of (121, 124, 173, 271);

• Statistics: 141 or 211 (recommended), 151;

• Four courses of laboratory science electives, selected from the following six:
Biology: 1, 2
Chemistry: 31, 32
Physics: 31 (with 21), 42 (with 22)

Note: Specific science courses are required for certain minors.

• English 1;

• Six credits (two courses) of Social Science Electives selected from: ALANA, Anthroplogy, Economics, Geography, History, Political Science, Psychology, Sociology, Women's Studies, or other advisor-approved electives;

• Six credits (two courses) of Humanities and Fine Arts Electives selected from: Art, Classics, Drama, Film, Language, Literature, Music, Philosophy, Religion, Speech, or other advisor-approved electives;

• 15 additional credits in advisor-approved electives in Humanities, Social Sciences, and Arts, to include either AH 95, AGRI 95, or one course approved by the College of Arts and Sciences as a course in non-European Cultures or Race Relations and Ethnicity, as specified under General Requirements in the College of Arts and Sciences section of this catalogue;

• 12 additional credits in advisor-approved free electives (excluding PEAC);

• Two credits of PEAC (see Academic and General Information for exceptions); and

• Completion of a University-approved minor (excluding Computer Science); courses used to fulfill other requirements may be used to satisfy minor requirements.

A sample course sequence can be found through http://www.cs.uvm.edu/.

No grade below a C- in any computer science course will be accepted, except as free elective credit.

Bachelor of Science, Computer Science and Information Systems Major: A minimum of 128 credits (126, if the student is exempt from PEAC) are required as follows:

• Computer Science: 14, 21, 26, 100, 101, 103, 104, 292,

plus nine additional credits (three courses) of 200-level courses (not more than three credits of which may be independent study);

• Business Administration: 60, 61, 120, 132, 141, 143, 144, 150, 173, 180;

• Economics: 11, 12;

• Mathematics: 19 and 20, or 21 and 22 (recommended sequence), 54;

• Statistics: 141;

• One laboratory science sequence, selected from the following three:

Biology: 1, 2
Chemistry: 31, 32
Physics: 31 (with 21), 42 (with 22)

• English 1;

• Nine credits (three courses) of Social Science Electives selected from ALANA, Anthropology, Economics, Geography, History, Political Science, Psychology, Sociology, Women's Studies, or other advisor-approved electives;

• Nine credits (three courses) of Humanities and Fine Arts Electives selected from: Art, Classics, Drama, Film, Language, Literature, Music, Philosophy, Religion, Speech, or other advisor-approved electives;

• 15 additional credits in advisor-approved free electives (excluding PEAC);

• Two credits of PEAC (see Academic and General Information for exceptions); and

• All students must complete either AH 95, AGRI 95, or one course approved by the College of Arts and Sciences as a course in non-European Cultures or Race Relations and Ethnicity, as specified under General Requirements in the College of Arts and Sciences section of this catalogue; a course used to fulfill other elective or distribution requirements may be used to fulfill this requirement.

A sample course sequence can be found through http://www.cs.uvm.edu/.

No grade below a C- in any computer science or business administration course will be accepted, except as free elective credit.

Note: This program is intended to fulfill the course requirements for eligibility for advanced standing in the MBA program at UVM.

Engineering Curricula

The College of Engineering and Mathematics offers professional programs in Civil, Electrical, and Mechanical Engineering accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET). Interdisciplinary engineering programs offered by the College include Engineering Management offered in cooperation with the School of Business Administration.

Engineering involves decision making and problem solving in order to analyze, design, and create devices or systems or processes to solve human problems. Engineering education at UVM provides a thorough grounding in the engineering sciences and engineering design. Engineering design is developed and integrated in each student,s program and culminates in a required major design experience which draws upon prior course work and which focuses on the issues and expectations of professional practice.

Courses in the humanities and social sciences (HSS) are required in engineering programs to broaden the student,s understanding of humankind and relationships in human society. HSS electives may not be taken on a pass/fail basis. Sixteen to 18 credit hours, depending upon the major, must be selected from the list presented here:

Approved Humanities Courses
Anthropology: all courses* except 200, 201, 290
Art: all Art History courses*
Botany: 6
Chinese: all courses*
Classics: all courses* (including Greek and Latin)
Community Devel & Applied Econ: 2, 61, 102, 156, 157, 171, 205, 208, 218
Economics: all courses* except 170, 270
English: all courses* except 1, 50, 117, 118, 119, and 120
Environmental Studies: 1, 2, 100, 178
French: all courses
World Literature: all courses
Geography: 1-2, 51-57, 60, 73, 151, 154, 155, 170-179
German: all courses*
Hebrew: all courses*
History: all courses*
Human Development & Family Studies: 5, 20, 60, 61, 65
Italian: all courses
Japanese: all courses*
Music 3, all History or Literature courses*
Natural Resources: 2, 6
Nursing: 15, 20, 140
Philosophy: all courses*
Political Science: all courses* except 181
Psychology 1, 15, 119, 130, 132, 152, 161, 163, 230, 231, 233, 234
Public Administration: 206
Recreational Mgmt.: 30
Religion: all courses*
Russian: all courses*
Social Work: 2, 47, 48, 165, 166, 167
Sociology: 1-57, 101-171, 202-272
Spanish: all courses
Theatre: 1, 41, 150, 151
Vermont Studies: 52, 64, 123, 160, 184
Women's Studies: all courses*

*Special topics, seminars, honors, reading and research, or internships are not normally considered appropriate HSS electives.

Students in **Civil Engineering, Engineering Management, Electrical Engineering** and **Mechanical Engineering** must include a three-credit cultural diversity course as one of their required humanities and social sciences courses. A course must be selected from the list of cultural diversity courses presented here:

All ALANA Studies courses; Anthropology 21, 23, 24, 64, 128, 160, 161, 162, 163, 165, 166, 167, 169, 170, 172, 175, 179, 180, 187 (cross-listed with SOC 119); Art: 8, 146, 185, 187, 188, 192, 285, 295, "Working with Culturally Diverse Sources", 295 "Cultural Transformations"; Classics 145; Communication Sciences 160; Economics 153; English 57, 61, 166, 167, 168, 170, 172, 173; French 289; Geography 1, 51, 56, 60, 151, 154, 173; History 9, 10, 40, 41, 45, 50, 51, 62, 63, 68, 140, 141, 149, 150, 151, 161, 163, 164, 168, 169, 187, 188, 189, 240, 241, 250, 252; Music 15; Philosophy 3, 121, 122, 221; Political Science 29, 129, 157, 168, 170, 174, 175, 177, 179; Religion 20, 21, 80, 128, 130, 131, 132, 134, 141, 145, 230; Sociology 19, 31, 118, 119 (cross-listed with ANTH 187), 171, 213, 219, 272; World Literature 6, 116, 145.

It is possible for engineering students to extend their undergraduate curriculum beyond the typical four-year schedules outlined on the following pages. Those who

would like to complete requirements over a longer time period must meet with their faculty advisor to plan how this can be done.

Engineering students can become affiliated with their respective national professional engineering societies: the American Society of Civil Engineers, the Institute of Electrical and Electronics Engineers, the American Society for Engineering Management, and the American Society of Mechanical Engineers. Each of these organizations has an authorized student chapter at UVM. Engineering students demonstrating high scholarship attainment, combined with exemplary character, are recognized by membership in the Vermont Alpha Chapter of Tau Beta Pi, the national engineering honor society. In addition, all engineering students may become affiliated with the student chapter of the Society of Women Engineers. These student organizations present opportunities for students to conduct activities similar to those of the national societies.

TYPICAL FIRST-YEAR CURRICULUM FOR ENGINEERING STUDENTS#

First-year engineering students generally* have one of two schedules:

SCHEDULE ONE	FALL	SPRING
Math 21	4	
Math 22		4
PE	1	
PE		1
English 1 or HSS elective**	3	
English 1 or HSS elective**		3
Com Sci 21	4	
Engineering 2		2
Chemistry 31	4	
Physics 31 & 21		5
Engineering 1	1	
HSS elective		3
TOTAL	17	18

SCHEDULE TWO	FALL	SPRING
Math 21	4	
Math 22		4
PE	1	
PE		1
English 1 or HSS elective**	3	
English 1 or HSS elective**		3
Engineering 2	2	
Computer Sci 21		4
Chemistry 31	4	
Physics 31 & 21		5
HSS elective	3	
Engineering 1	1	
TOTAL	18	17

* Exceptions are: Electrical Engineering 3; Mechanical Engineering Option 3.

**Students must take English 1 in either the first or second semester. Students should take an HSS course during the semester in which English 1 is not taken.

Civil and Environmental Engineering

The curriculum in Civil Engineering leading to the degree of Bachelor of Science in Civil Engineering offers instruction in environmental engineering, hydraulics and hydrology, soil mechanics, structural engineering, and transportation engineering, as well as in the engineering sciences, mathematical sciences, natural sciences, humanities, and the social sciences.

There are two options leading to the degree of Bachelor of Science in Civil Engineering: General Civil Engineering and Environmental Engineering. The degree requires a minimum of 130 semester hours, plus two credits of physical education activities.

The goal of the curriculum is to prepare students for a variety of opportunities for their future in the profession. Students are encouraged to prepare for life-long learning to enhance their choices for further study or for employment in a global marketplace for engineering professionals. The curriculum also focuses on environmentally-responsible engineering practices.

Engineering design is developed and integrated in each student's program and culminates in a required major design experience which draws upon prior course work and which focuses on the issues and expectations of professional practice.

No more than three grades of D, D+, or D– will be acceptable in all required courses in engineering and engineering science including design and professional electives as stated in the curricula below for the junior and senior years.

OPTION 1 – General Civil Engineering

	1st SEMESTER	2nd SEMESTER
SOPHOMORE YEAR		
Math. 121, Calculus III	4	–
Physics 42 with 22, Electromag. Modern Physics	5	–
CE 1, Statics	3	–
CE 10, Surveying	3	–
CE 12, Surveying Lab.	–	1
Statistics 143, Statistics for Engineering	3	–
Math. 271, Applied Math/Engineers	–	3
ME 12, Dynamics	–	3
Science Elective[1]	–	4
CE 11, Computer Tools	–	4
HSS Elective[2]	–	3
	18	18

	1st SEMESTER	2nd SEMESTER
JUNIOR YEAR		
CE 100, Mech. of Materials	3	–
CE 140, Transportation	3	–
CE 150, Environmental Engineering	3	–
CE 160, Hydraulics	4	–
CE 101, Materials Testing	–	2
CE 151, Water/Wastewater	–	3
CE 170, Struct. Analysis I	–	4
ME 40/44, Thermo/Heat Transfer	–	4
HSS Elective[2]	3	3
	16	16

	1st SEMESTER	2nd SEMESTER
SENIOR YEAR		
EE 100, Elect. Principles	4	–
CE 171, Struct. Analysis II	3	–
CE 172, Steel Design	3	–
CE 180, Geotechnical Principles	4	–
CE 125, Eng'g. Econ./Decisions	–	3
CE 173, Reinf. Concrete Design[5]	–	3
Design Elective[3]	–	3
CE 176, Senior Design Seminar	–	1
Professional Elective[4]	–	3
HSS Elective	–	3
	14	16

OPTION 2 – Environmental Engineering

SOPHOMORE YEAR	1st SEMESTER	2nd SEMESTER
Math. 121, Calculus III	4	–
Physics 42 with 22, Electromag. Modern Physics	5	–
CE 1, Statics	3	–
CE 10, Surveying	3	–
CE 12, Surveying Lab.	–	1
Statistics 143, Statistics for Engineering	3	–
Math. 271, Applied Math/Engineering	–	3
ME 12, Dynamics	–	3
Chemistry 32, or Biology 2	–	4
CE 11, Computer Tools	–	4
HSS Elective[2]	–	3
	18	18

JUNIOR YEAR	1st SEMESTER	2nd SEMESTER
CE 100, Mech. of Materials	3	–
CE 150, Environmental Engineering	3	–
CE 160, Hydraulics	4	–
ME 40/44, Thermodynamics	4	–
CE 101, Materials Testing	–	2
CE 151, Water/Wastewater	–	3
CE 154, Environ. Analysis	–	2
CE 170, Struct. Analysis I	–	4
HSS Elective[2]	3	3
	17	14

SENIOR YEAR	1st SEMESTER	2nd SEMESTER
EE 100, Elect. Engnr. Concepts I	4	–
CE 140, Transportation	3	–
CE 180, Soil Mech	4	–
Professional Elective[4]	3	–
CE 125, Eng'g Econ./Planning	–	3
CE 172 or Ster. Design	3	–
CE 173, Reinf. Concrete Design[5]	–	3
Design Electives[3]	–	3
Design Electives[3]	–	3
CE 176, Senior Design Seminar	–	1
HSS Elective[2]	–	3
	14	13-16

[1]Science electives are: BIOL 1A, 2A;CHEM 32, 42, 141; GEOL 1; NR 276; PSS 264.
[2]Required Humanities course: students must elect one from the list of approved cultural diversity courses in the College of Arts and Sciences in the areas of either Non-European Cultures or Race Relations and Ethnicity in the U.S.
[3]Design Electives are CE 141, 142, 161, 175, 181, 230, 250, 251, 253, 255, 256, 258, 260, 261, 264, 265, 280, 283.
[4]Professional Electives are all Design Electives plus CE 171, 191, 192, any CE 200 level course, Natural Resource 278.
[5]May be replaced by CE 172, Steel Design.

Electrical and Computer Engineering

The curriculum in Electrical Engineering leading to the degree of Bachelor of Science in Electrical Engineering offers instruction in electrical and electronic circuits, electromagnetics, semiconductor devices, signal and system analysis, communications, digital systems, well as in physical and life sciences, humanities, and social sciences.

There are four options leading to an ABET accredited degree of Bachelor of Science in Electrical Engineering: General Electrical Engineering, Computer Engineering, Biomedical Engineering, and Premedical Engineering. The degree requires a minimum of 130 semester hours for Option 1, 128 semester hours for Option 2, 130 for Option 3, and 130 credit hours for Option 4. In addition, two credits of physical education activities are required.

All students must elect one course from the list of approved cultural diversity courses as one of their required humanities and social sciences courses.

Students may pursue a cross-college or departmental minor provided that they fulfill all Electrical Engineering degree requirements.

Engineering design is developed and integrated in each student's program and culminates in a required major design experience which draws upon prior course work and which focuses on the issues and expectations of professional practice.

An accelerated master's degree program leading to an M.S. in Materials Science is available. For specific program requirements refer to the Graduate College Catalogue.

No more than three grades of D, D+, or D– will be acceptable in all required courses in engineering, basic science, and computer science including all technical electives as stated in the catalogue for the junior and senior years.

OPTION 1: General Electrical Engineering

SOPHOMORE YEAR	1st SEMESTER	2nd SEMESTER
Math. 121, Calculus III	4	–
EE 3, Linear Circuit Analysis I	3	–
EE 81, Sophomore Lab I	2	–
EE 131, Fund. of Digital Design	3	–
Physics 42 and 22, Electromag. & Mod. Phys.	5	–
Math. 271, Applied Math.	–	3
HSS Elective	–	3
EE 82, Sophomore Lab II	–	2
HSS Elective	–	3
EE 4, Linear Circuit Analysis II	–	3
Statistics 143/151	–	3
	17	17

JUNIOR YEAR	1st SEMESTER	2nd SEMESTER
EE 120, Electronics I	3	–
EE 141, EM Field Theory I†	3	–
EE 163, Solid State Electronics I†	4	–
EE 171, Signals & Systems†	4	–
EE 183, Jr. Lab I	2	–
HSS Elective	3	3
EE 121, Electronics II	–	3
EE 142, EM Field Theory II†	–	3
EE 164, Solid State Electronics II†	–	3
EE 174, Intro to Comm. Sys.†	–	3
EE 184, Jr. Lab II	–	2
Phys. Ed.	–	1
EE 134, Microprocessors†	–	4
	15 or 16	15 or 16

SENIOR YEAR	1st SEMESTER	2nd SEMESTER
Non-EE Eng. Sci. Elective##,*	3	–
EE Engr. Sci. Elective***	3	–
EE Tech. Elective****	3	–
Approved EE Design Sequence I**	3	–
EE 185, Senior Lab	1	–
Remaining EE Sequence	3-4	–
EE Tech. Elective****	–	3
EE 186, Sr. Lab II	–	1
EE Engr. Science Elective***	–	3
Remaining EE Sequence	–	6-7
Approved EE Design Sequence II**	–	3
	16 or 17	16 or 17

*Non-EE Engr. Sci. Electives: CE 1, 10, 150; ME 12, 40, 114.

**A 100- or 200-level EE design course sequence approved by an Electrical Engineering faculty advisor.
***EE Engr. Sci. Elective: 113, 210, 241, 242, 245, 246, 261, 266, 274.
****Tech. Electives: EE 113, 164, 210, 221, 222, 224, 227, 228, 231, 241, 245, 246, 250, 251, 261, 266, 274, 275, 276, 295; CS 26, 100, 101, 103, 104, 201, 222; Phys. 128, 201, 202; ME 12, 14, 40, 114, 150; CE 125; Chem. 162; Math. 54, 124, 173; Statistics 143, 151. All 200-level Math. and Statistics courses except for practicum, seminar, and special topics.
#No credit may be received for both EE 140 (offered in prior years) and the current EE 141.
##Non-EE Eng. Sci. Elect. and an elective from spring semester can be exchanged.
†Pick two of the first 3 or 4 EE sequence; take remainder in fourth year.

OPTION 2: Computer Engineering

FIRST-YEAR	1st SEMESTER	2nd SEMESTER
CS 21, Comp. Programming I	4	–
Math 21, Calculus I	4	–
Chemistry 31, Intro. Chemistry	4	–
English 1, Written Expression	3	–
Physical Education	1	–
Engr. 1, Intro. to Engr.	1	–
HSS Elective	–	3
Math 22, Calculus II	–	4
Physics 31 and 21, Intro. Physics	–	5
Physical Education	–	1
Engr. 2, Graph. Comm.	–	2
	17	15

SOPHOMORE YEAR	1st SEMESTER	2nd SEMESTER
Math. 121, Calculus III	4	–
Physics 42 and 22, Electromag. & Mod. Phy.	5	–
EE 3, Linear Circuit Analysis I	3	–
EE 81, Sophomore Lab I	2	–
HSS Elective	3	–
Math 271, Applied Math.	–	3
CS 26, Computer Programming II	–	3
EE 4, Linear Circuit Analysis II	–	3
EE 82, Sophomore Lab II	–	2
Statistics 143/Stat 151	–	3
HSS Elective	–	3
	17	17

JUNIOR YEAR	1st SEMESTER	2nd SEMESTER
EE 120, Electronics I	3	–
Math 54, Fund. of Comp.	3	–
EE 163, Solid State I or EE 171	4	–
EE 131, Digital Design	3	–
HSS Elective	3	–
EE 121, Electronics II	–	3
CS 104, Data Structures	–	3
EE 134, Microprocessors	–	4
Approved CS Elective****	–	3
HSS Elective	–	3
	16	16

SENIOR YEAR	1st SEMESTER	2nd SEMESTER
EE 171, Sig. & Syst. or EE 163	4	–
EE 183, Junior Lab I	2	–
EE 141, EM Field Theory I#	3	–
EE/CS Elective **	3	–
Approved EE Design Seq. I***	3	–
Approved CS Elective****	–	3
EE 184, Junior Lab II	–	2
Non-EE Engineering Sci. Elective*	–	3
EE/CS Elective**	–	3
Approved EE Design Seq. II***	–	3
HSS Elective	–	3
	15	17

*Non-EE Engr. Sci. Electives: See Option 1.
**Any 100- or 200-level CS or EE course approved by a Computer Engineering advisor.
***A 100- or 200-level EE course sequence approved by a Computer Engineering advisor.
****Any 100- or 200-level CS course approved by a Computer Engineering advisor.
#No credit may be received for both EE 140 (offered in prior years) and the current EE 141.

OPTION 3: Biomedical Engineering

FIRST-YEAR	1st SEMESTER	2nd SEMESTER
CS 21, Comp. Programming I	4	–
Eng. 1, Written Exp.	3	–
Chem. 31, Intro. Chem.	4	–
Math 21, Calculus I	4	–
Engr. 1, Intro. to Engr.	1	–
Phys. Ed.	1	1
Math. 22, Calculus II	–	4
Chem. 42, Intro. Organic Chem.	–	4
HSS Elective	–	3
Engr. 2, Graph. Comm.	–	2
HSS Elective	–	3
	17	17

SOPHOMORE YEAR	1st SEMESTER	2nd SEMESTER
Math 121, Calculus III	4	–
Phys. 31 & 21, Intro. Phys.	5	–
EE 3, Linear Circuit Analysis I	3	–
EE 81, Sophomore Lab I	2	–
HSS Elective	3	–
Physics 42 & 22, E&M & Mod. Phys.	–	5
Math 271, Applied Mathematics	–	3
HSS Elective	–	3
EE 4, Linear Circuit Analysis II	–	3
EE 82, Sophomore Lab II	–	2
	17	16

JUNIOR YEAR	1st SEMESTER	2nd SEMESTER
EE 120, Electronics I	3	–
ANPS 19, Anatomy & Physiology	4	–
EE 183, Junior Lab I	2	–
EE 163, Solid St. Phys. Electronics I	4	–
Stat. 143/151	3	–
EE 184, Junior Lab II	–	2
EE 134, Microprocessors *or* EE 227	–	4–3
EE 121, Electronics II	–	3
ME 114, Intro. to Engr. Mechanics	–	3
ANPS 20, Anatomy & Physiology	–	4
	16	16–15

SENIOR YEAR	1st SEMESTER	2nd SEMESTER
ME 207, Biomechanics I	3	–
EE 171, Signals & Systems	4	–
EE 141, EM Field Theory I#	3	–
EE 185, Senior Lab I	1	–
EE Design Elective**	3	–
HSS Elective	3	–
EE 142, EM Field Theory II	–	3
EE 174, Intro. to Comm. Systems	–	3
EE 134 or 227, Bio. Meas. Inst. & Sys.	–	4-3
EE 186, Senior Lab II	–	1
EE 187, Senior Project	–	3
HSS Elective	–	3
	17	17–16

**EE Design Elective: EE 131, 187, 221, 222, 224, 228, 231, 250, 275, 276.
No credit may be received for both EE 140 (offered prior years) and the current EE 141.

OPTION 4: Premedical Engineering

FIRST-YEAR	1st SEMESTER	2nd SEMESTER
CS 21, Comp. Programming I	4	–
Eng. 1, Written Exp.	3	–
Chem. 31, Intro. Chem.	4	–
Math 21, Calculus I	4	–
Engr. 1, Intro. to Engnr.	1	–
Phys. Ed.	1	1
Math 22, Calculus II	–	4
Chem. 32, Intro. Chem.	–	4
HSS Elective	–	3
Engr. 2, Graph. Comm.	–	2
HSS Elective	–	3
	17	17

SOPHOMORE YEAR	1st SEMESTER	2nd SEMESTER
Math. 121, Calculus III	4	–
Physics 31 & 21, Intro. Phys.	5	–
EE 3, Linear Circuit Analysis I	3	–
EE 81, Sophomore Lab I	2	–
HSS Elective	3	–
Phys. 42 & 22, E&M & Mod. Phys.	–	5
Math. 271, Applied Mathematics	–	3
EE 4, Linear Circuit Analysis II	–	3
EE 82, Sophomore Lab II	–	2
HSS Elective	–	3
	17	16

JUNIOR YEAR	1st SEMESTER	2nd SEMESTER
Biology I, Prin. of Biology	4	–
Non-EE Engr. Sci. Elective*	3	–
Chem. 141, Organic Chem.	4	–
HSS Elective	3	–
Stat. 143/151	3	–
Biology 2, Prin. of Biology	–	4
EE 134, Microprocessors	–	4
HSS Elective	–	3
Chem. 142, Organic Chem.	–	4
	17	15

SENIOR YEAR	1st SEMESTER	2nd SEMESTER
EE 141, EM Field Theory I#	3	–
EE 120, Electronics I	3	–
EE 183, Junior Lab I	2	–
EE 171, Signals & Sys.	4	–
EE 163, Solid St. Phys. Electronics I	4	–
EE 174, Intro. Comm. Sys.	–	3
EE 121, Electronics II	–	3
EE 142, EM Field Theory II	–	3
EE 184, Junior Lab II	–	2
EE 187, Senior Project	–	3
EE Engr. Science Elective***	–	3
	16	17

*Non-EE Engr. Sci. Elective: See Option 1.
***EE Engr. Science Elective: See Option 1.
#No credit may be received for both EE 140 (offered in prior years) and the current EE 141.

Engineering Management

A curriculum in Engineering Management leading to the degree of Bachelor of Science in Engineering Management is offered in cooperation with the School of Business Administration. Engineering management is a broad discipline concerned with the art and science of planning, organizing, directing, and controlling activities that have a technical component. Designing, producing, selling, and servicing products in the marketplace require managers who possess both an ability to apply engineering principles and a skill in managing technical projects and people in technical jobs. The curriculum is designed to provide a basic education in an engineering discipline with the study of management concepts and techniques. The curriculum incorporates the equivalent of one-half year of study in the area of the humanities and social sciences. Candidates for this degree must earn a minimum of 128 semester hours, depending upon the engineering option selected, plus two credits of physical education activities. Engineering Management students are reminded that they must choose one HSS elective from the list of approved cultural diversity courses in the College of Arts and Sciences.

OPTION 1: Civil Engineering
(131-132 hours)

SOPHOMORE YEAR	1st SEMESTER	2nd SEMESTER
CE 1, Statics	3	–
CE 10, Surveying	4	–
Economics 11, Prin. of Economics	3	–
Math. 121, Calculus III	4	–
BSAD 60, Financial Acctng.	4	–
Math. 271, Applied Math.	–	3
BSAD 61, Managerial Acctng.	–	4
Physics 42, with 22, EM & Mod. Phys.	–	5
ME 12, Dynamics	–	3
ME 14, Mechanics of Solids	–	3
	18	18

JUNIOR YEAR	1st SEMESTER	2nd SEMESTER
Stat. 143, Stat. for Engineers; or 211, Stat. Methods I	3	–
EE 100, Elect. Engr. Concepts I	4	–
Economics 12, Prin. of Economics	3	–
CE 160, Hydraulics	4	–
CE 125, Engr. Economics	–	3
CE 140, Trans. Engineering	3	–
BSAD 141, Mgmt. Info. Systems	–	3
CE 170, Structural Analysis	–	4
BSAD 173, Prod. & Oper. Analy.	–	3
HSS Elective	–	3
	17	16

SENIOR YEAR	1st SEMESTER	2nd SEMESTER
BSAD 120, Mgmt. & Organ. Behav.	3	–
CE 150, Environmental Engr.	3	–
EMGT 185, Senior Project	3	–
HSS Elective	3	–
BSAD 178, Quality Control; or Stat. 224, Statistics for Qual. & Prod.	3	–
BSAD 270, Quant. Analysis; or 272 Discrete Simulation	–	3
CE Conc. Elective*	–	3-4
EMGT 175, Mgmt. of Technology	–	3
Engr. Mgmt. Elective**	–	3
	15	12-13

*CE Concentration electives: CE 11, 141, 151, 161, 171, 172, 175, 180, 260, 261, and ME 40 with 44.
**Engineering Management electives: BSAD 143, 144, 145, 168, 170, 174, 177, 192; and Statistics 221, 224, 225, 229, 231, 233, 237, 253.

OPTION 2: Electrical Engineering
(130-131 hours)

SOPHOMORE YEAR	1st SEMESTER	2nd SEMESTER
Economics 11, Prin. of Economics	3	–
Math. 121, Calculus III	4	–
BSAD 60, Financial Acctng.	4	–
EE 3, 4, Linear Circuit Analysis I, II	3	3
EE 81, 82, Sophomore Lab I, II	2	2
Math. 271, Applied Math.	–	3
BSAD 61, Managerial Acctng.	–	4
Physics 42 with 22, EM & Mod. Phys.	–	5
	16	17

JUNIOR YEAR	1st SEMESTER	2nd SEMESTER
Stat. 143, Stats. for Engr.; or Stat. 211, Stat. Methods I	3	–
Economics 12, Prin. of Economics	3	–
EE 131, Digital Design	3	–
CE 125, Engr. Economics	–	3
EE 120, 121, Electronics I, II	3	3
BSAD 141, Mgmt. Info. Systems	3	–
EE 134, Microcomputer Based Systems	–	4
BSAD 173, Prod. & Oper. Analy.	–	3
HSS Elective	–	3
	15	16

SENIOR YEAR	1st SEMESTER	2nd SEMESTER
BSAD 120, Mgmt. & Organ. Behav.	3	–
EMGT 185, Senior Project	3	–
BSAD 178, Quality Control; or Stat. 224, Stats. for Qual. & Prod.	3	–
HSS Elective	3	–
EE 163, Solid State Phys. Elect.; or 171, Signals & Systems	4	–
EE 231, Dgtl. Comp. Design	–	3
BSAD 270, Quant. Analysis; or 272, Discrete Simulation	–	3
EE Conc. Elective*	–	3-4
EMGT 175, Mgmt. of Technology	–	3
Engr. Mgmt. Elective**	–	3
	16	15-16

*EE Conc. Electives: EE 113, 141. 163 (if not used to fulfill another requirement), 164 (163 is prerequisite), 171 (if not used to fulfill another requirement), 174 (171 is prerequisite), EE 183-184 (both courses are needed to meet this requirement), 210, 228, 250, 251, and 295.
**Engineering Management electives: BSAD 143, 144, 145, 168, 170, 174, 177, 192; and Statistics 221, 224, 225, 229, 231, 233, 237, 253.

OPTION 3: Mechanical Engineering
(130-132 hours)

SOPHOMORE YEAR	1st SEMESTER	2nd SEMESTER
CE 1, Statics	3	–
ME 40 with 44, Thermodyn. and Heat Transfer	4	–
Economics 11, Prin. of Economics	3	–
Math. 121, Calculus III	4	–
BSAD 60, Financial Acctng.	4	–
Math. 271, Applied Math.	–	3
BSAD 61, Managerial Acctng	–	4
Physics 42 with 22, EM & Mod. Phys.	–	5
ME 12, Dynamics	–	3
ME 14, Mechanics of Solids	–	3
	18	18

JUNIOR YEAR	1st SEMESTER	2nd SEMESTER
Stat. 143, Stats. for Engr.; or Statistics 211, Stat. Methods I	3	–
EE 100, Elect. Engr. Concepts I	4	–
Economics 12, Prin. of Economics	3	–
ME 101, Engr. Materials	3	–
CE 125, Engr. Economics	–	3
ME 82, ME Laboratory I	–	1
ME 171, Design of Elements	–	3
BSAD 141, Mgmt. Info. Systems	3	–
EE 101 or ME 162, EE Concepts/Mfg. Eng.	–	3-4
BSAD 173, Prod. & Oper. Analy.	–	3
HSS Elective	–	3
	16	16-17

SENIOR YEAR	1st SEMESTER	2nd SEMESTER
BSAD 120, Mgmt. & Organ. Behav.	3	–
ME 143/161, Fluid Mechanics/ Mfg. Engnr.	3	–
EMGT 185, Senior Project	3	–
HSS Elective	3	–
BSAD 178, Quality Control; or Stat. 224, Stats. for Qual. & Prod.	3	–
BSAD 270 or 272, Quant. Anal./Simulation	–	3
ME Conc. Elective*	–	3-4
EMGT 175, Mgmt. of Technology	–	3
Engr. Mgmt. Elective**	–	3
	15	12-13

*ME concentration electives: ME 42, 111, 144, 161 (if not used to fulfill another requirement),162 (if not used to fulfill another requirement), 172; and EE 131, 134.
**Engineering Management electives: BSAD 143, 144, 145, 168, 170, 174, 177, 192; and Statistics 221, 224, 225, 229, 231, 233, 237, 253.

Mechanical Engineering

The curriculum in Mechanical Engineering leading to a degree of Bachelor of Science in Mechanical Engineering offers instruction in design, solid and fluid mechanics, materials, manufacturing processes and systems, as well as in engineering, life and physical sciences, humanities, and social sciences.

There are threeoptions leading to the degree of Bachelor of Science in Mechanical Engineering: (1) General Mechanical Engineering (126 semester hours); (2) Biomedical Engineering (127 semester hours); (3) Premedical Engineering (137 semester hours). In addition, all options require two credits of physical education activities.

Engineering design is developed and integrated in each student's program and culminates in a required major design experience with draws upon prior course work and which focuses on the issues and expectations of professional practice.

No more than three grades of D, D+, or D– will be acceptable in all required courses in engineering, basic science, and computer science including all technical electives as stated in the Catalogue for the junior and senior years.

General Option (1)

FIRST YEAR	1st SEMESTER	2nd SEMESTER
Chem 31, Intro.	4	–
CS 21, Comp. Prog. I	4	–
Eng. 1, Writ. Exp.	3	–
Engr. 1, Intro. to Engr.	1[1]	–
Math. 21, 22, Cal. I & II	4	4

Phys. Ed.	1	1
Engr. 2, Graph. Comm.	–	2
HSS Electives[2]	–	3
Phys. 31/21, Intro. Phys	–	5
	16	15

	1st	2nd
SOPHOMORE YEAR	SEMESTER	
CE I, Statics	3	–
HSS Elective[2]	3	–
Math. 121, Calc. III	4	–
Phys. 42/22 EM&Mod. Phys.	5	–
ME 40, 42 Thermo	3	3
Stat. 143, Statistics for Engineering	–	3
Math. 271, Appl. Math Engrs.	–	3
ME 12, Dynamics	–	3
ME 14, Mech. Solids	–	3
ME 82, Mech Eng Lab I	–	1
	18	16

	1st	2nd
JUNIOR YEAR	SEMESTER	
ME 101, Materials	3	–
ME 111, System Dyn.	3	–
ME 143, Fluid Mech.	3	–
EE 100, 101, Con. I&II	4	4
ME 123, 124, Lab II, III	2	2
HSS Elective[2]	–	3
ME 144, Heat Trans.	–	3
ME 171, Des.of Elem.	–	3
	15	15

	1st	2nd
SENIOR YEAR	SEMESTER	
ME 161, Manufacturing Engr. I	3	–
ME 183, Mech. Eng. Lab IV	3	–
ME 185, Sr. Project	1	–
ME Elective[3]	3	3
Tech. Elective[4]	3	3
HSS Electives[2]	3	3
ME Elective[5]	–	3
ME 186, Sr. Project	–	2
	16	14

[1]Recommended, not required.
[2]One HSS course from A&S Non-European or Race Relation and Ethnicity list.
[3]ME Course 200-level or higher.
[4]Any 100-level or higher courses in EM and BSAD (except Stat. 111, 141, and ME 114); or CS 14, CS 16, or CS 26; or Natural Sciences with approval of advisor.
[5]ME 162, 172, 265, or ME2XX course with approval of advisor.

Biomedical Option (2)

	1st	2nd
FIRST YEAR	SEMESTER	
Eng. 1, Writ. Exp.	3	–
Engr. 1 Intro. to Engr.	1[1]	–
Chem 31, Intro.	4	–
CS 21, Comp. Prog. I	4	–
Math. 21, 22, Cal. I&II	4	4
Phys. Ed.	1	1
HSS Elective[2]	–	3
Engr. 2, Graph. Comm.	–	2
Phys. 31/21, Intro. Phys.	–	5
	16	15

	1st	2nd
SOPHOMORE YEAR	SEMESTER	
CE 1, Statics	3	–
Math. 121, Calc. III	4	–
HSS Elective[2]	3	–
Phys. 42/22 EM&Mod. Phys.	5	–
ME 40, 42 Thermo.	3	3
Math. 271, Appl. Math. Engrs.	–	3
ME 12, Dynamics	–	3
ME 14, Mech. Solids	–	3
ME 82 Mech. Eng. Lab I	–	1
Stat. 143, Statistics for Engineering	–	3
	18	16

	1st	2nd
JUNIOR YEAR	SEMESTER	
ME 101, Materials	3	–
ME 143, Fluid Mech.	3	–
EE 100 Concepts I, II	4	4
ME 123, 124, Lab II, III	2	2
Anat. & Phys. 19 & 20	4	4
ME 144, Heat Trans.	–	3
ME 171, Des. of Elem.	–	3
	16	16

	1st	2nd
SENIOR YEAR	SEMESTER	
ME 111, System Dynamics	3	–
ME 183, Mech. Eng. Lab. IV	3	–
ME 185, Sr. Project	1	–
ME 161, Manufacturing Engr. I	3	–
ME 207, 20X Biomechanics[3]	3	3
Tech. Electives[4]	3	3
ME 186, Sr. Project	–	2
HSS Electives[2]	–	9
	16	17

[1]Recommended, not required.
[2]One HSS course from A&S Non-European or Race Relation and Ethnicity list.
[3]One of two ME 208. 209.
[4]Any 100-level or higher courses in EM and BSAD (except Stat. 111, 141, and ME 114); or CS 14, CS 16, or CS 26; or Natural Sciences with approval of advisor.

Premedical Option (3)

	1st	2nd
FIRST YEAR	SEMESTER	
CS 21, Comp. Prog. I	4	–
Eng. 1, Writ. Exp.	3	–
Engr. 1, Intro. to Engr.	1[1]	–
Phys. Ed.	1	–
Chem. 31, 32 Intro.	4	4
Math 21, 22, Calc. I&II	4	4
Engr. 2, Graph. Comm.	–	2
HSS Elective[2]	–	3
Phys. 31/21, Intro. Phys.	–	5
	16	18

	1st	2nd
SOPHOMORE YEAR	SEMESTER	
CE 1, Statics	3	–
HSS Elective[2]	3	–
Math. 121, Calc. III	4	–
Phys. 42/22, EM&Mod. Phys.	5	–
ME 40, 42, Thermo.	3	3
Phys. Ed.	–	1
Math. 271, Appl. Math. Engrs.	–	3
ME 12, Dynamics	–	3
ME 14, Mech. Solids	–	3
ME 82, Mech. Eng. Lab. I	–	1
Stat. 143, Statistics for Engineering	–	3
	18	17

	1st	2nd
JUNIOR YEAR	SEMESTER	
ME 101, Materials	3	–
ME 143, Fluid Mech.	3	–
ME 123, 124, Lab II, III	2	2
Chem. 141, 142, Org. C.	4	4
Biol. 1/2, Princ. Biol.	4	4

ME 144, Heat Trans.	–	3
ME 171, Des. of Elem.	–	3
	16	16

	1st	2nd
SENIOR YEAR	SEMESTER	
ME 111, System Dynmics	3	–
ME 161, Manufacturing Engr. I	3	–
ME 183, Mech. Eng., Lab. IV	3	–
HSS Electives[2]	3	6
ME 185, 186 Sr. Project	1	2
EE 100 & 101, Concepts I&II	4	4
ME Elective[3]	–	3
ME Elective[1]	–	3
	17	18

[1]Recommended, not required.
[2]One HSS course from A&S Non-European or Race Relation and Ethnicity list.
[3]ME course 200-level or higher.
[4]ME 162, 172, 265, or ME2XX course with approval of advisor.

Mathematics and Statistics Curricula

The College of Engineering and Mathematics offers programs in several areas of the mathematical sciences and their applications. The curriculum leads to the Bachelor of Science degree in Mathematics. The Applied and Interdisciplinary Mathematics option combines a major in applied mathematics with an approved concentration in an allied field that emphasizes the application of mathematics. The Statistics Program offers a major in Statistics within this degree.

Accelerated master's programs in Mathematics, Statistics, and Biostatistics are also offered. These programs allow students to earn both their B.S. and M.S. degrees in as little as five years. Details are given in the following sections for Mathematics and Statistics.

A Handbook for Mathematics and Statistics Majors, available from the Mathematics and Statistics department office or the Undergraduate Mathematics Student Organization, provides additional information on the mathematics and statistics degree programs, honors in mathematics and statistics, mathematics and statistics courses, advising and other support for students, extracurricular activities, career options, and other material of interest to potential majors. For further information see http://www.emba.uvm.edu/EM/Math.

Basic Curriculum

Mathematics: Math. 21, 22, 121, 52, 124, 241, 251, and CS 21.

Statistics: Math. 21, 22, 121, 124; CS 21; and one of Stat. 141, 143 or 211, 151 or 251, 201, 221 or 227, 241 or 261, and 281 or 293.

Applied and Interdisciplinary Mathematics: Math. 21, 22, 121; CS 21; Math. 124, 230, and 237.

In addition to the Basic Curriculum above, candidates for the degree of Bachelor of Science in Mathematics must complete the following requirements A, B, C, and D.

A. Major Courses

Mathematics: A minimum of 21 additional hours in Mathematics, Statistics, or Computer Science courses numbered 100 or above. At least 12 hours must be in courses numbered 200 or above and no more than 12 hours may be chosen from Computer Science.

Statistics: An additional six credit hours of Statistics, so that the total credits earned in Statistics is at least 24 hours. A minimum of two additional hours in Mathematics, Statistics, or Computer Science courses numbered 100 or above, so that a total of at least 45 credits in the basic and major courses is earned. A total of 18 credit hours in the combined basic curriculum and majors courses must be taken at the 200 level and no more than 12 hours can be taken in Computer Science.

Applied and Interdisciplinary Mathematics: A minimum of 18 additional hours in Mathematics, Statistics, or Computer Science courses numbered 100 or above, of these 18 hours, 6 must be in Mathematics or Statistics, and must be numbered 200 or above.

B. Allied Field Courses

Allied fields include the following:

Twenty-four hours selected from the following Allied Fields:

(1) Physical Sciences
(2) Biological Sciences
(3) Medical Sciences
(4) Engineering
(5) Computer Science (26 or higher)
(6) Agricultural Sciences
(7) Business Administration
(8) Psychology
(9) Economics

Each student in consultation with his or her advisor must plan a sequence of Allied Field courses consistent with his or her professional and personal goals. A student interested in pursuing intensive studies in an area not specifically listed is encouraged to plan a program with his or her advisor and submit it to the appropriate departmental committee for review and approval. The requirements are as follows:

Mathematics: Twenty-four hours selected from the above list of Allied Fields. Of these 24 hours, at least six must be in courses numbered 100 or above, and at least six must be taken in fields (1) to (5). Courses used to satisfy requirement A above may not be used to satisfy this requirement.

Statistics: Twenty-four hours selected from the above list of Allied Fields, including at least one laboratory experience in science or engineering. Of these 24 hours, at least six must be in courses numbered 100 or above and at least six must be taken in fields (1) to (5). Courses used to satisfy requirement A above may not be used to satisfy this requirement.

Applied and Interdisciplinary Mathematics: At least seven courses with a concentrated focus in an allied field. The major courses in requirement A and the Allied Field courses in requirement B must form a coherent program that has the written approval of the student's faculty advisor in the Mathematics and Statistics Department. When appropriate, and with the written approval of the advisor, at most three courses can overlap requirements A and B.

C. Humanities and Social Science Courses

(Courses used to satisfy requirement B above may not be used to satisfy this requirement.)

English 1, and 21 hours of courses selected from categories I, II, and III listed below. These 21 hours must be distributed over at least two categories, and at least six hours must be taken in each of the two categories chosen. Statistics majors must include Speech 11.

I. ***Language and Literature***

Chinese
Classics
English
French
General Literature
German
Greek
Hebrew
Italian
Linguistics
Russian
Spanish

II. ***Fine Arts, Philosophy, and Religion***

Art	Religion
Film	Speech
Music	Theatre
Philosophy	

III. ***Social Sciences***

Anthropology	History
Communication Sciences	Political Science
	Psychology
Economics	Sociology
Geography	

D. Total Hours

A minimum of 120 semester hours is required, plus two hours in physical education activities. First-year students must include the one-hour Race and Culture course, EDSS or another course approved by the College of Arts & Sciences as meeting the "Race Relations and Ethnic Diversity in the United States" requirement.

E. Grades

No more than three grades of D, D+, or D– in the 200/300 level Mathematics and Statistics courses used to satisfy the "Core Curriculum" and "Major Courses" requirements will be acceptable.

Mathematics

The mathematics curriculum is quite flexible. It is designed to provide a sound basic training in mathematics that allows a student to experience the broad sweep of mathematical ideas and techniques, to utilize the computer in mathematics, and to develop an area of special interest in the mathematical sciences.

In addition to the Bachelor of Science degree described here, the Department of Mathematics and Statistics also offers a Bachelor of Arts degree in the College of Arts and Sciences. A faculty advisor from Mathematics will assist students in determining which degree program best suits their individual needs and plans. Some of the career plans for which a well-designed major in mathematics can provide ideal preparation are highlighted below.

Recommendations for Major Courses

In consultation with their advisor, students should choose an area of interest within the mathematics major and plan a coherent program that addresses their interests in mathematics and its applications. This area might be one of those listed below, or it might be another area suggested by the student. As a guide, students interested in one of the areas would typically take at least three courses in that area, including all of the courses marked with an asterisk (*). In addition, students should take courses from at least two other areas. Because of its centrality in mathematics, students should make sure that they take at least one course listed under Classical Mathematics. In following these recommendations, a course listed in more than one area is meant to be counted only once.

1. ***Classical Mathematics.*** Classical mathematics encompasses those areas having their roots in the great traditions of mathematical thought, such as geometry and topology, mathematical analysis, algebra and number theory, and discrete mathematics. Courses in this area include the following: *Math. 141, 151, 173, 236, 240, 241*, 242, 251*, 252, 255, 257, 260, 264, 273, 331, 353.*
2. ***Applied Mathematics.*** Applied Mathematics involves the use of mathematical methods to investigate problems originating in the physical, biological, and social sciences, and engineering. Mathematical modeling, coupled with the development of mathematical and computational solution techniques, illuminates mechanisms which govern the problem and allows predictions to be made about the actual physical situation. Current research interests of the faculty include biomedical mathematics, fluid mechanics and hydrodynamic stability, asymptotics, and singular perturbation theory. Courses in this area include the following: *Math. 230*, 236, 237*, 238, 240, 272, 273, 274.*
3. ***Computational Mathematics.*** Computational mathematics involves both the development of new computational techniques and the innovative modification and application of existing computational strategies to new contexts where they have not been previously employed. Intensive computation is central to the solution of many problems in areas such as applied mathematics, number theory, engineering, and the physical, biological and natural sciences. Computational mathematics is often interdisciplinary in nature, with algorithm development and implementation forming a bridge between underlying mathematical results and solution of the physical problem of interest. Courses in this area include the following: *Math. 173, 230, 237*, 238, 274, Statistics 201.*
4. ***Theory of Computing.*** The mathematical theory of computing deals with the mathematical underpinnings allowing effective use of the computer as a tool in problem solving. Aspects of the theory of computing include: designing parallel computing strategies (graph theory), analyzing strengths and effectiveness of competing algorithms (analysis of algorithms), examining conditions which ensure that a problem can be solved by computational means (automata theory and computability), and rigorous analysis of run times (complexity theory). Courses in this area include the following: *Math. 173, 223, 224*, 243, 273, 325, Computer Science 346, 353.*
5. ***Mathematics of Management:*** Mathematics of Management involves the quantitative description and study of problems particularly concerned with the making of decisions in an organization. Problems are usually encountered in business, government, service industries, etc., and typically involve the allocation of resources, inventory control, product transportation, traffic control, assignment of personnel, and investment diversification. Courses in this area include the following: *Math. 173, 221*, 222, 230, 236, 273, Statistics 141 or 211, Statistics 151 or Math. 207, Statistics 224, 241, 253.*
6. ***Actuarial Mathematics:*** Actuaries use quantitative skills to address a variety of problems within business environments, and especially within the life insurance industry. Two professional organizations sponsor qualifying examinations and grant recognition to actuaries in the U.S. and Canada. A unique feature of the actuarial profession is that formal training is typically completed after graduation "on-the-job." Students planning an actuarial career can prepare for and complete some actuarial examinations prior to graduation. Several departmental courses serve as preparation for the examinations: *Math. 21, 22, 121, and 124 for the first examination; Statistics 141 or 211, {Statistics 151 or Math. 207} *, and {Statistics 241 or 261} * for the second examination; Statistics 221 or 231, 225, and 253 for the third examination; Math. 221, 222, and Statistics 252b for the fourth examination: and Math. 237 for the fifth examination.*
7. ***Probability and Statistical Theory.*** Probabilistic reasoning is often a critical component of practical mathematical analysis or risk analysis and can usefully extend classical deterministic analysis to provide stochastic models. It also provides a basis for statistical theory, which is concerned with how inference can be drawn from real data in any of the social or physical sciences. Courses in this area include the following: *Math. 222, 241, 242, (Statistics 151 or Math. 207)*, Statistics 241*, 252a, 252b, 261, 262, 270.*

Recommendations for Allied Field Courses

Students who select the Applied and Interdisciplinary Mathematics option are required to consult with their advisor in setting up their concentration in an Allied Field, as described under requirements B. Students who select the General Mathematics option should also discuss Allied Field courses with their advisor and choose ones which complement their mathematical interests. Students with certain mathematical interests are advised to emphasize an appropriate Allied Field as indicated below and take at least six hours in courses numbered 100 or above in that field.

Applied Mathematics: Allied Field (1), (2), (3), (4), (6), or (9).

Computational Mathematics: Allied Field (4) or (5)

Mathematics of Management: Allied Field (7). Students interested in Mathematics of Management are advised to include Economics 11 and 12 in their choice of Humanities and Social Sciences courses, and to include Business Administration 60 and 61 in their choice of Allied Field courses. Those wishing to minor in Business Administration should contact the School of Business Administration and also take Business Administration 173 and two other courses chosen from Business Administration 168, 170, 174, 177, 178, and 272.

Statistics

Students receiving the B.S. in Mathematics may elect Statistics as their major. In addition, students receiving a B.A. degree in Arts and Sciences may concentrate in Statistics as a part of their Mathematics major. Statistics is a mathematical science extensively used in a wide variety of fields. Indeed, every discipline which gathers and interprets data uses statistical concepts and procedures to understand the information implicit in their data base. Statisticians become involved in efforts to solve real world problems by designing surveys and experimental plans, constructing and interpreting descriptive statistics, developing and applying statistical inference procedures, and developing and investigating stochastic models or computer simulations. To investigate new statistical procedures requires a knowledge of mathematics and computing as well as statistical theory. To apply concepts and procedures effectively also calls for an understanding of the field of application.

The curriculum is designed for students who plan to enter business, industry, or government as statisticians; to become professional actuaries; or to continue on to graduate school in statistics/biostatistics or another field where a quantitative ability can prove valuable (business, operations research, medicine, public health, demography, psychology, etc.). The courses and curricula are administered through the Statistics Program Steering Committee which includes faculty from Statistics, College of Medicine Biometry Facility, Psychology, Natural Resources, and the Agricultural Experiment Station. Students are encouraged to undertake special projects to gain experience in data analysis, design, and statistical computing. Also, experience can be gained with local industry and other organizations for those interested in quality control, industrial statistics, survey and market research or forecasting, for example.

A minor in Statistics can be earned by taking a total of 15 credits of Statistics courses, Math. 19 or 21 or equivalent, and Statistics 201 or Computer Science 16 or above. Note that Mathematics majors can minor in Statistics as well. Not more than seven credits of Stat. 11/51/111/140/141/143/211 may be counted toward the total Stat. credits in the minor.

Statistics majors may also minor in Mathematics by completing MATH 21, 22, 52 or 121, and 9 more credits in mathematics at the 100+ level. Since Statistics majors normally take MATH 21, 22, 121 and 124, they just need two more mathematics courses at the 100+ level.

Students earning the B.S. in Mathematics may earn a double major in Mathematics and Statistics by meeting the requirements of the Statistics major and earning an additional 18 credits in Mathematics, to include one of Math. 141, 241, 151 or 251.

Further details on the Statistics major and minor curricula may be obtained from the Director of the Statistics Program. The Handbook for Mathematics and Statistics majors, available from the Mathematics and Statistics department office, also provides a wealth of useful information.

Premedical Concentration in Statistics. Each student electing the Premedical Concentration in Statistics will fulfill the general requirements for the Statistics major. Statistics 200 is recommended as an important elective for students interested in medicine or allied health. In addition, the premedical concentration should include as a minimum two years of chemistry with laboratory (Chemistry 31, 32, or 35, 36, 37, 38, and 141, 142), at least one year of physics with laboratory (Physics 21, 31, 22, 42 or 21, 31, 125), and at least one year of biology with laboratory (Biology 1, 2). Exposure to medical research problems will be provided through supervised experiences in the College of Medicine Biometry Facility.

Concentration in Quality. Students interested in methods of quality control and quality improvement are encouraged to develop a concentration in quality. Regularly offered courses include Statistics 224 and 265. Related courses to consider include Business Administration 178 and others in the Production and Operations Management and Quantitative Methods area of Business Administration. Also, special topics courses in Total Quality Management have been offered as Statistics 95 (summers) and Statistics 295. Project experience in industrial quality control or in health care quality can be gained in Statistics 191 and 281, or 293-294.

Accelerated Master's Programs. A master's degree in Statistics or in Biostatistics can be earned in a shortened time by careful planning during the junior and senior years at UVM. For example, the M.S. could be earned in just one additional year, because six credits of undergraduate courses can also be counted concurrently towards the M.S. degree requirements. Students should discuss this possibility with the Statistics Program Director as soon as they think they may be interested in this program. Also consult the Graduate College catalogue.

The College of Nursing and Health Sciences

The College of Nursing and Health Sciences (CNHS) offers undergraduate and graduate programs in a variety of health care disciplines. The entry-level degree programs prepare the student for initial entry into clinical or laboratory practice and the pursuit of further education. The curricula include rigorous academic preparation and extensive field experience at selected facilities. The graduate programs prepare students for advanced practice in the health care disciplines and to assume leadership roles in practice, education, and research. The faculty of the CNHS is committed to excellence in teaching, the conduct of research that extends knowledge and contributes to the science of each discipline, and public service to improve the health care of citizens of state, national and global communities.

The following entry-level degree programs are offered: Associate Degree program in Dental Hygiene; Bachelor of Science degree programs in Biomedical Technology; Medical Laboratory Science; Nuclear Medicine Technology; Nursing; and Radiation Therapy; and the Master of Physical Therapy degree program. Graduates of the entry-level professional programs are eligible to sit for the appropriate licensure examination and enter practice or otherwise seek employment in the commercial/industrial sector. All of the professional programs needing accreditation and/or state approval for licensure eligibility have achieved and maintain such status. The Radiation Therapy program does not require accreditation and is not accredited at this time.

Non entry-level graduate programs leading to a Master of Science degree include: Biomedical Technology; Movement Science and Rehabilitation; and Nursing (advanced population-focused nursing, adult health nursing, primary care nursing, and an accelerated RN-BS-MS track). The Biomedical Technology program emphasizes biomedical research and applications. Both the Movement Science and Rehabilitation and Nursing graduate programs are designed to enhance the clinical and/or academic background of licensed health care professionals and/or prepare them for advanced practice and research.

More information about the College, its mission and philosophy, faculty and programs can be found under the appropriate academic program headings on the UVM web site (http://www.uvm.edu/) and in the Graduate Catalogue.

ORGANIZATION

The College consists of four departments: Biomedical Technologies; Dental Hygiene; Nursing; and Physical Therapy.

UNDERGRADUATE DEGREE PROGRAMS

Associate in Science degree programs:

Dental Hygiene

Bachelor of Science degree programs:

Biomedical Technology
Medical Laboratory Science
Nuclear Medicine Technology
Nursing
Radiation Therapy

DEGREE REQUIREMENTS

Requirements for admission, retention and graduation are detailed below for each of the undergraduate degree programs. The College of Nursing and Health Sciences reserves the right to require the withdrawal of any student whose academic record, performance, or behavior in the professional programs is judged unsatisfactory. All candidates for admission and continuation must be able to perform the essential clinical as well as academic requirements of CNHS programs. These requirements include: the capacity to observe and communicate; sufficient motor ability to perform physical diagnostic examinations and basic laboratory and clinical procedures; emotional stability to exercise good judgment and to work effectively in stressful situations; and intellectual ability to synthesize data and solve problems. CNHS students must be able to meet these technical standards either with, or without, reasonable accommodations. Some professional licensing examiners, clinical affiliates and/or potential employers may require students and graduates to disclose personal health history, substance abuse history, and/or criminal convictions, which may, under certain conditions, impact eligibility for professional examinations, licensing, clinical affiliation, and/or employment. Some programs have additional clinical requirements such as CPR certification.

RESPONSIBILITIES

There are some special responsibilities associated with clinical education. Students are responsible for their own transportation to and from clinical sites, and where relevant, the costs of housing for clinical experiences. All students must carry professional liability insurance during clinical rotations. The University is not responsible for medical costs resulting from injury during clinical rotation, or during any other curricular activity, unless this injury is due to negligence by the University. The Center for Health and Wellbeing, UVM Student Health, offers a student insurance plan for students who need health insurance.

Applicants to the College's clinical programs must realize there is always an element of risk through exposure to infectious disease. Faculty and clinical staff make every effort to educate all students in appropriate modes of infection control in order to minimize these risks. Hepatitis B immunization series and a tetanus booster within the last 10 years are required prior to beginning the clinical experience. Additional immunization requirements for nursing students are listed in the Department of Nursing Undergraduate Student Handbook. Immunizations will be available through the Student Health Center for a discounted fee. In our experience, health insurance coverage for immunization varies. If and when coverage is provided, pre-authorization by the insurance provider is usually required.

AREAS OF STUDY

Biomedical Technologies

Programs in the Department of Biomedical Technologies lead to Bachelor of Science degrees in Biomedical Technology, Medical Laboratory Science, Nuclear Medicine Technology, and Radiation Therapy. A core curriculum of approximately 40 credit hours serves students in all four programs. A cross-college minor in Molecular Diagnostics is available within the department. In addition to these undergraduate offerings, a Master of Science degree is offered by

the department. The courses of study for each undergraduate degree program, the Accelerated Master's Program, and the Molecular Diagnostics minor are described below. Graduates of all four programs are prepared for immediate employment, as well as to pursue post-baccalaureate education in the life sciences or professional education in medicine. Courses in the humanities and basic sciences are taken in the department and throughout the University, including the College of Medicine. Requirements for admission are the same as the general University requirements, with the addition that applicants must have taken high school biology, mathematics through trigonometry, and chemistry; physics is highly recommended.

Bachelor of Science. A minimum of 127 semester credit hours including two credit hours of physical education, an overall grade-point average of 2.0, and a 2.0 GPA in professional courses are required for graduation in all four areas of study.

Departmental Honors. A student of at least junior standing whose minimum grade-point average is 3.0 in professional and basic science courses is eligible for invitation by the faculty to participate in the departmental honors program. Students who accept the invitation will be required to complete one of the following options: (1) participation in at least two senior level specialty seminars with completion of an independent reading thesis; (2) completion of an independent research project. Excellent and committed work will be required for a student to be granted Departmental Honors.

BIOMEDICAL TECHNOLOGY This four-year curriculum leading to the baccalaureate degree prepares students for careers in biomedical research. All students pursuing this degree option are required to complete an approved cross-college minor, as well as a research internship. The student's major course of study blends basic science course work with intensive laboratory experiences. Special emphasis is placed on the application of molecular diagnostics to the health sciences industry.

	1st	2nd
FIRST YEAR	SEMESTER	
Chemistry 23 (or 31-32)	4	(4)
Biomedical Technologies 1	1	-
Biomedical Technologies 3	1	-
English	3	-
Math. (13, 19, or higher)	3	-
Computer Science	3	
Biomedical Technologies 34	-	3
Electives	3	6-10
Physical Education	1	1
EDSS 11, Race and Culture	1	-
	17	17

	1st	2nd
SECOND YEAR	SEMESTER	
Anatomy & Physiology 19-20	4	4
Biomedical Technologies 4	3	-
Biomedical Technologies 54	-	4
Biomedical Technologies 123	4	-
Chemistry 42 (or 141 and 142)	(4)	4
Statistics 141	3	-
Electives	0-3	3
	17-18	15

	1st	2nd
THIRD YEAR	SEMESTER	
Biochemistry 201	3	-
Biochemistry 202	1	-
Biochemistry 212 or AGBI 220 or 230	-	3
Biomedical Technologies 242	-	3
Biomedical Technologies 244	1	-
Biomedical Technologies 295	3	-
Biomedical Technology 293	-	1
Biomedical Technology 284-285	3	3
Pathology 101	3	-
Electives	3	6
	17	16

	1st	2nd
FOURTH YEAR	SEMESTER	
Biomedical Technology 281	4	-
Biomedical Technologies 296	2	-
Biomedical Technology 286	3	-
Biomedical Technology 298	-	3
Medical Laboratory Science 222 (or Biology 101 or Botany 132)	-	3
Medical Laboratory Science 231	3	-
Statistics 200 (or higher)	3	-
Electives	-	7
	15	13

Approved Minors. Students in the Biomedical Technology degree program are required to complete a cross-college minor. Students should contact the department administering the minor program and fill out the application. If accepted, the student will be assigned a "minor advisor" from that department who must approve all program plans and course selections. Students wishing to pursue a minor not listed should contact their advisor. With permission, students may complete a concentration in clinical microbiology, hematology or chemistry in place of a minor. The concentration requirements are available in the department. The following have been approved:

Accounting. Prerequisites are Economics 11, 12, Math. 19 or 21, Statistics 111 or 141. Requirements are Business Administration 65 or 60, 61, plus 161, 162, 164, 168.

Business Administration. Prerequisites are Economics 11, 12, Math. 19 or 21, Statistics 111 or 141. Requirements are Business Administration 65 or 60, 61, plus three courses from 120, 132, 141, 150, 173, 180.

Computer Science. Requirements are 18 hours in computer science to include at least nine hours at the 100 level or above. Note: Careful planning of prerequisite math courses will be required.

Consumer Economics. Requirements are Community Development and Applied Economics 58, 157, 158, 159, 127 or 155, plus one from 127, 128, 150, 151, 158, 291 or 296. Fifteen credit hours are required.

Microbiology. Requirements are MMG 101, 102, Botany 132 plus six hours from MMG 195, 201, 203, 211, 220, 222, 223, or 225.

Molecular Genetics. Requirements are MMG 101, 102, 211, Botany 132, plus three hours from MMG 195, 201, 203, 223, 225.

MEDICAL LABORATORY SCIENCE This four-year curriculum leading to the baccalaureate degree is accredited by the National Accrediting Agency for Clinical Laboratory Sciences.

The clinical laboratory scientist is involved in the development, performance, and evaluation of laboratory tests that lead to assessment of health status, diagnosis of disease, and monitoring of therapeutic treatment. The clinical laboratory experience is obtained at Fletcher Allen Health Care - Vermont's Academic Medical Center (FAHC) - and the Vermont State Health Department Laboratories.

On completion of the baccalaureate program, graduates are eligible for national certification.

Upon consultation with an advisor, students may follow an individualized curriculum that can lead to certification in one of the clinical laboratory specialties (Microbiology, Chemistry, Hematology, or Immunology).

FIRST YEAR	1st SEMESTER	2nd SEMESTER
Chemistry 23 (or 31-32)	4	(4)
Biomedical Technologies 1	1	-
Biomedical Technologies 3	1	-
English	3	-
Math. (10 or 13 or 19 or higher)	3	-
Computer Science	-	3
Biomedical Technologies 34	-	3
Electives	3	6-9
Physical Education	1	1
EDSS 11, Race and Culture	1	-
	17	16-17

SECOND YEAR	1st SEMESTER	2nd SEMESTER
Anatomy & Physiology 19-20	4	4
Biomedical Technologies 54	-	4
Biomedical Technologies 123	4	-
Statistics 111 or 141	3	-
Chemistry 42 (or 141 and 142)	(4)	4
Electives	3-6	3
	17-18	15

THIRD YEAR	1st SEMESTER	2nd SEMESTER
Biochemistry 201	3	-
Biochemistry 202	1	-
Biochemistry 212 or AGBI 220 or 230	-	3
Biomedical Technologies 244	1	-
Biomedical Technologies 295	3	-
Biomedical Technology 293	-	1
Med. Lab. Science 262	-	4
Microbiology 222	-	4
Pathology 101	3	-
Allied Health 120	3	-
Electives	3	3
	17	15

FOURTH YEAR	1st SEMESTER	2nd SEMESTER
Biomedical Technologies 242	-	3
Med. Lab. Science 201, 220, 230, 250, 256, 260	5-6	5-6
Med. Lab. Science 222	-	3.5
Med. Lab. Science 255	3	-
Med. Lab. Science 231	3	-
Biomedical Technologies 110-111	0.5	0.5
Biomedical Technologies 296	2	-
Elective	3	-
	16.5-17.5	12-13

Cytotechnology Option: The Department of Biomedical Technologies, in cooperation with the School of Cytotechnology at Fletcher Allen Health Care, offers a 3+1 option to the Medical Laboratory Science degree program with specialization in Cytotechnology. Cytotechnology involves the diagnosis of human disease through microscopic study of cells. The primary function of a cytotechnologist is to prepare and evaluate a variety of cellular samples for the presence of cancer and precancerous lesions. The program is accredited by the Committee on Accreditation of Allied Health Education (CAAHEP).

Requirements for admission are the same as those for the Medical Laboratory Science curriculum. Admission to the University does not guarantee acceptance into the FAHC School of Cytotechnology. A separate application process for the senior year is required during the junior year. On completion of the baccalaureate program, graduates are eligible to take the national certification exam. The minimum requirements for the first three years at the University include 20 semester hours of biological science, eight semester hours of chemistry, and three semester hours of mathematics. Students may follow the medical laboratory science curriculum with appropriate substitutions or may satisfy the requirements through other majors. Recommended biological science courses include a combination of the following: general biology, anatomy-physiology, genetics, microbiology, histology, parasitology, cell biology, and embryology.

FOURTH YEAR	1st SEMESTER	2nd SEMESTER
Medical Cytology I-II Lecture	4	4
Medical Cytology I-II Lab	4	4
Cytology Seminar	2	-
Laboratory Techniques	-	3
Cytology Practicum	-	12
	10	23

A minimum of 33 credit hours in the senior year and a total of 127 credit hours are required for the B.S. degree.

NUCLEAR MEDICINE TECHNOLOGY This four-year curriculum leading to the baccalaureate degree is accredited by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology. Nuclear medicine technology is the medical specialty concerned with the use of small amounts of radioactive materials for diagnosis, therapy, and research. Though many other diagnostic techniques are available, nuclear medicine uniquely provides information about both the structure and function of virtually every major organ system.

FIRST YEAR	1st SEMESTER	2nd SEMESTER
Biomedical Technologies 1	1	-
Biomedical Technologies 3	1	-
Biomedical Technologies 34	-	3
Chemistry 23 (or 31-32)	4	(4)
Computer Science	-	3
English	3	-
Math. (10 or 13, or 19, or higher)	3	-
Psychology 1	-	3
Electives	3	3-6
Physical Education	1	1
AH 95 or AGRI 95, Race and Culture	1	-
	17	16-17

SECOND YEAR	1st SEMESTER	2nd SEMESTER
Anatomy & Physiology 19-20	4	4
Biomedical Technologies 4	3	-
Chemistry 42 (or 141 and 142)	(4)	4
Nuclear Medicine Tech. 51	3	-
Nuclear Medicine Tech. 52	-	3
Nuclear Medicine Tech. 75	2	-
Statistics 111 or 141	-	3
Electives	0-3	3
	15-16	17

THIRD YEAR	1st SEMESTER	2nd SEMESTER
Biochemistry 201	3	-
Biochemistry 202	1	-
Biomedical Technologies 242	-	3
Biomedical Technologies 244	1	-
Biomedical Technologies 295	3	-
Biomedical Technology 293	-	1
Nuclear Medicine Tech. 153	3	-
Nuclear Medicine Tech. 154	-	3

Nuclear Medicine Tech. 155	3	-
Nuclear Medicine Tech. 156	-	3
Nuclear Medicine Tech. 163	1	-
Nuclear Medicine Tech. 164	-	2
Pathology 101	3	-
Electives	-	3
	18	15

	1st	2nd
FOURTH YEAR	SEMESTER	
Biomedical Technologies 110	0.5	-
Biomedical Technologies 296	2	-
Nuclear Medicine Tech. 263	3	-
Nuclear Medicine Tech. 264	-	15
Allied Health 120	3	-
Electives	6	-
	14.5	15

Clinical education takes place at one of our clinical affiliations. The initial experience is obtained at the Fletcher Allen Health Care (FAHC). At least one experience will be at an affiliation outside Burlington, which will require additional room, meals and transportation expenses.

CLINICAL AFFILIATIONS

NUCLEAR MEDICINE TECHNOLOGY

Central Vermont Hospital, Berlin, VT
Hartford Hospital, Hartford, CT
Lahey Clinic, Burlington, MA
Maine Medical Center, Portland, ME
Mercy Hospital, Portland, ME
Dartmouth-Hitchcock Medical Center, Hanover, NH
Fletcher Allen Health Care, Burlington, VT
Pharmalogic, LTD, Williston, VT
Winchester Memorial Hospital, Winchester, MA

Note: The above list of clinical affiliations is subject to change.

RADIATION THERAPY Radiation Therapy is the medical specialty that uses high energy radiations (x-rays, gamma rays, electron beams, etc.) in the treatment of disease. Radiation therapists are responsible for daily treatments, providing support for patients as they cope with their disease, and contributing as vital members of the medical team responsible for the patient's treatment plan.

	1st	2nd
FIRST YEAR	SEMESTER	
Biomedical Technologies 1	1	-
Biomedical Technologies 3	1	-
Biomedical Technologies 34	-	3
Chemistry 23 (or 31-32)	4	(4)
Computer Science	-	3
English	3	-
Math. (10, or 13, or 19, or higher)	3	-
Psychology 1	-	3
EDSS 11, Race and Culture	1	-
Physical Education	1	1
Electives	3	3-6
	17	16-17

	1st	2nd
SECOND YEAR	SEMESTER	
Anatomy & Physiology 19-20	4	4
Biomedical Technologies 4	3	-
Radiation Therapy 52	-	2
Radiation Therapy 75	2	-
Sociology	-	3
Statistics 111 (or 141)	-	3
Nutrition 43	3	-
Electives	3	3
	15	15

	1st	2nd
THIRD YEAR	SEMESTER	
Biomedical Technology 293	-	1
Biomedical Technologies 295	3	-
Pathology 101	3	-
Physics 11,12	4	4
Radiation Therapy 144	-	1
Radiation Therapy 173	2	-
Radiation Therapy 174	-	1
Radiation Therapy 176	-	3
Electives	5	6
	17	16

	1st	2nd
FOURTH YEAR	SEMESTER	
Allied Health 120	3	-
Biomedical Technologies 296	2	-
Radiation Therapy 223	3	-
Radiation Therapy 274	-	14
Radiation Therapy 275	2	-
Radiation Therapy 277	4	-
Radiation Therapy 280	-	3
	14	17

Clinical education takes place at one of our clinical affiliations. The initial experience is obtained at the Fletcher Allen Health Care (FAHC). At least one experience will be an affiliation outside Burlington which will require additional room, meals, and transportation expenses.

CLINICAL AFFILIATIONS

RADIATION THERAPY

Dartmouth-Hitchcock Medical Center, Hanover, NH
Elliot Hospital, Manchester, NH
Fletcher Allen Health Care, Burlington, VT
Massachusetts General Hospital, Boston, MA

Note: The above list of clinical affiliations is subject to change.

Students who already have the Associate in Science degree in Radiation Therapy may apply for transfer into the baccalaureate program. Requirements are a total of 127 credit hours for graduation including approved transfer credits from their Associate degree. Additional required courses for the baccalaureate degree are Chemistry 23 (or 31 and 32), Physics 11 and 12, Allied Health 120, Pathology 101, Biomedical Technology 293, Biomedical Technologies 295, and 12 credit hours of special topics (Biomedical Technologies 299) in the concentration areas of dosimetry, topographical anatomy, patient care, treatment planning, and quality assurance. These independent studies will be coordinated by the student's advisor.

CROSS-COLLEGE MINOR. The Department of Biomedical Technologies offers a cross-college minor in Molecular Diagnostics. The minor emphasizes the applications of molecular biology techniques to diagnostic testing. The program of study includes 15-16 credit hours of both didactic and laboratory experiences. Prerequisite courses include at least one semester each of general and organic chemistry and two semesters of biology, or anatomy and physiology. Acceptance into the program requires the completion of the prerequisite courses with a GPA of 2.5 or better. An application is required for admission and may be obtained in 302 Rowell Building.

Required Courses: Immunology (BMT 242), Immunology Laboratory (BMT 244), Molecular Applications (BMED 281), Research Concepts (BMED 293), Undergraduate Research (BMED 297); plus 3-4 credit hours from BMT 4, 34, 54, 123, MLS 222, 231, 255.

ACCELERATED MASTER'S PROGRAM. A master's degree in Biomedical Technology can be earned in a shortened time by careful planning in the junior and senior years at UVM. Students should discuss this possibility with the Department Graduate Program Director as soon as they think they might be interested in this program. For example, the M.S. could be earned in one additional year, as six credits of undergraduate courses may also be counted concurrently towards the M.S. degree requirements.

Applications and further information may be obtained from the Graduate Program Director in the Department. Also consult the Graduate College catalogue for further information.

Dental Hygiene

The Department of Dental Hygiene offers a two-year curriculum leading to an Associate in Science degree and a Certificate in Dental Hygiene.

The program is accredited by the Commission on Dental Accreditation of the American Dental Association. Graduates are eligible to write the National Board Examination in Dental Hygiene. The program meets requirements for licensure determined by most states.

Requirements for admission to Dental Hygiene are the same as for the general University. Applicants are welcome to visit the department to discuss dental hygiene with faculty and students.

The courses of study are designed to give the student a well-rounded foundation in basic sciences, specific knowledge in dental sciences, and an understanding of the humanities. Clinical experience is obtained in the Department's dental hygiene clinic where patients of all ages present with a variety of clinical problems. Dental hygiene students also have an opportunity to increase their communication skills through oral health education presentations in area schools.

The dental hygiene curriculum is highly structured, and semester course loads are heavy. Students who have the opportunity to complete liberal arts and/or basic science courses prior to entering the program are encouraged to do so. Further guidance can be obtained by calling or writing to the departmental office. First-year Dental Hygiene students should add approximately $1,800 for an instrument kit and clinical attire.

FIRST YEAR	1st SEMESTER	2nd SEMESTER
Dental Hygiene 1, 2	4	2
Dental Hygiene 11, 12	3	3
Dental Hygiene 61	-	2
Nutritional Sci. 43	3	-
Anatomy & Physiology 19-20	4	4
Chemistry 23	-	4
English 1	3	-
Psychology 1	-	3
Physical Education	1	-
	18	18

SECOND YEAR	1st SEMESTER	2nd SEMESTER
Dental Hygiene 62	-	3
Dental Hygiene 91	2	-
Dental Hygiene 141	3	-
Dental Hygiene 143	3	-
Dental Hygiene 146	-	2
Dental Hygiene 181-182	4	4
Microbiology BMT 54 or MMG 65	4	-
Sociology or Anthropology	-	3
Speech 11	-	3
Elective	-	3
EDSS 11, Race and Culture	1	-
	17	18

A minimum of 71 approved credit hours, including one hour of physical education, and a minimum grade-point average of 2.0 are required for the Associate in Science degree in this curriculum. A grade of C or better is required for all professional courses.

Nursing

The Department of Nursing offers an undergraduate educational program to prepare qualified individuals for the practice of professional nursing and a graduate program for advanced nursing practice. The undergraduate program leads to the Bachelor of Science degree and is approved by the Vermont State Board of Nursing and accredited by the National League for Nursing Accrediting Commission (61 Broadway, 33rd Floor, New York, NY 10006; 800-664-1656, Ext. 153). Graduates of the program are eligible to apply for registered nurse licensure.

Bachelor of Science: Applicants must meet the general admission requirements for the University. Financial Aid is available in the form of scholarships, loans, awards, and employment (see section on Financial Aid). A minimum of 127 approved semester hours is required for the Bachelor of Science degree. A grade of C is required in selected cognate nursing prerequisite courses (see Student Handbook for details). A grade of C or better is required in all nursing major courses. A minimum 2.0 overall grade-point average is required for graduation. Full-time and part-time plans of studies are available. Students are encouraged to purchase a personal computer. Specifications for hardware and software requirements may be found in the Nursing Department's Handbook for Undergraduate Students.

The required courses in the humanities and sciences complement the preparation for nursing as well as contribute to a well-rounded education. Graduates are eligible to apply for licensure as registered nurses and have the foundation for continued formal study in nursing at the master's and doctoral levels.

The curriculum, conducted in four academic years, provides balance in general and professional education. Courses in the sciences - biological, physical, social, and humanities - serve as a foundation for the nursing courses.

A typical full-time program of studies follows:

FIRST YEAR	1st SEMESTER	2nd SEMESTER
English	3	3
Psychology 1	3	-
Human Development 5	3	-
Chemistry 23, 26	4	4
Sociology 1*	-	3
Environmental Studies **	4	-
Abnormal Psychology 152	-	3
Philosophy or Religion or Ethics	-	3
Physical Education	1	1
	18	17

*any sociology course under 100
**ENVS 1, 2 or 7 or ENSC 1 or NR 185

SECOND YEAR	1st SEMESTER	2nd SEMESTER
Elective	3	-
Microbiology 65	4	-
Anatomy & Physiology 19-20	4	4
Nutritional Science 43	3	-
Statistics 111 or 141	3	-
Professional Nursing 110	-	3
Professional Nursing 111	-	2
Professional Nursing 112	-	1
Professional Nursing 113	-	4
	17	14

THIRD YEAR	1st SEMESTER	2nd SEMESTER
Introduction to Human Disease 101	3	-
Professional Nursing 127	4.5	-
Professional Nursing 128	4	-
Professional Nursing 129	3	-
Professional Nursing 130	-	2
Professional Nursing 131	-	3
Professional Nursing 132	-	3.5
Professional Nursing 134	-	5
Elective	-	3
	14.5	16.5

FOURTH YEAR	1st SEMESTER	2nd SEMESTER
Professional Nursing 231	2	-
Professional Nursing 234	5	-
Professional Nursing 235	5	-
Elective	3	3
Professional Nursing 240	-	3
Professional Nursing 241	-	3
Professional Nursing 242	-	6
	15	15

The Bachelor of Science degree with a major in nursing is awarded upon completion of a minimum of 127 credit hours (125 if the student is over 25 years of age) in full or part-time study. The major components of the curriculum are: required non-nursing courses, elective courses, and major nursing courses. Students must successfully achieve:

- 59 credit hours of major nursing courses;
- 56 credit hours of required non-nursing courses (54 if excluding the physical education requirement; and
- 12 credit hours of elective courses.

A three-credit "Race and Culture" course is required prior to graduation.

BS Program for Registered Nurses: The program for registered nurses has been designed in light of changes in the health care delivery system and to better serve the registered nurse returning to school. In this program, the Bachelor of Science degree with a major in nursing is awarded upon completion of a minimum of 127 credit hours (125 if the student is over 25 years of age) in full or part-time study. The major components of the curriculum are: required non-nursing courses, elective courses, and major nursing courses. The curriculum plan may vary for each student depending on the type and number of credits transferred to UVM. The focus of the baccalaureate program component is on health and health promotion for individuals, families, groups, and communities; and the factors that influence delivery of health care services. The program is an RN-BS-MS accelerated program, with an option for students to "step out" after completion of the baccalaureate requirements with a B.S. degree. Separate application is required for the graduate program.

The baccalaureate nursing courses are available on-line, through interactive TV, or in a traditional classroom setting and include:

	Hours
Professional Nursing 111	2
Professional Nursing 112	1
Professional Nursing 151	4
Professional Nursing 152	4
Professional Nursing 261	4
Professional Nursing 262	4
Graduate Nursing 310	3
Graduate Nursing 315	3

The baccalaureate non-nursing courses include:

Chemistry 23	4
Outline of Organic and Biochemistry 26	4
Environmental Studies 1, 2, 7 or ENSC 1 or NR 185	3/4
Elements of Statistics 111 or 141	3
Human Development 5	3
Microbiology and Pathogenesis 65	4
Fundamentals of Nutrition 43	3
Anatomy and Physiology 19/20	8
Philosophy, Religion, or Ethics	3
Written Expression 1	3
English elective	3
General Psychology 1	3
Abnormal Psychology 152	3
Sociology	3
General Education electives	15-16
Physical Education	2
Race and Culture course	3

Transfer to Nursing: Individuals planning to seek admission are urged to call the School of Nursing (802-656-3830) for more detailed information and to arrange for a personal interview prior to applying for admission.

Graduate Studies: Students interested in master's preparation in nursing may obtain information on admission and curricula in the Graduate Catalogue, available in the offices of the Graduate College.

Physical Therapy (Master of Physical Therapy)

The Department of Physical Therapy offers a three-year graduate program, leading to a Master of Physical Therapy (MPT) degree. Prior to entry, a minimum of three to four years of undergraduate study is required (see below). Note that two options are available to students considering entry into the MPT program:

Postbaccalaureate Option: Students may opt to complete their baccalaureate degree, making application to the MPT program during their senior year, or sometime thereafter. Postbaccalaureate candidates also are encouraged to apply. For students who choose this option, the total length of postbaccalaureate study in the MPT Program is three years.

Combined Curriculum (3+3) Option: For students who meet the criteria, we offer a guaranteed admission program to the Master of Physical Therapy program. Through this program, entering first-year undergraduates are guaranteed a space in the MPT program at the end of three years at UVM, provided they meet certain eligibility requirements. High school students who wish to pursue physical therapy at UVM may begin their college career by selecting from the following undergraduate majors: all 42 majors in the College of Arts and Sciences; and either of two majors, Nutrition and Food Sciences or Biological Science, in the College of Agriculture and Life Sciences. Those students who opt to complete the requirements for their undergraduate major in three years, and who were not initially guaranteed admission may apply to the MPT program during their third year. If admitted to the MPT program, students will begin their first year of graduate study during their fourth year. After successful completion of this first year of graduate study, students will be awarded the baccalaureate degree in their undergraduate major. Thereafter, following successful completion of their second and third years of graduate study, students will be awarded the Master of Physical Therapy. For students who choose this option, the total length of study is six years. For details regarding the MPT program, please see the Graduate College Catalogue, or contact the Department of Physical Therapy, University of Vermont, 305 Rowell Building, Burlington, VT 05405, (802) 656-3252, or www.uvm.edu/~sahs/pt.html.

The School of Business Administration

The mission of the School of Business Administration is to educate Vermont, national, and international students for careers in management, to conduct research that extends knowledge and contributes to the effectiveness of teaching and learning, to forge productive links with business and not-for-profit organizations, and to develop faculty capabilities to interpret and respond to significant changes in management education, research, and practice. In its education, research, and service programs, the School is committed to our special responsibility to serve the citizens of Vermont.

The program integrates forward-looking professional studies with rigorous studies in the liberal arts and sciences by graduating bachelors' candidates who

- know how to think critically, learn independently, and search for and integrate new information;
- understand what managers do, how businesses operate, and how markets behave;
- understand how knowledge is created;
- use knowledge, creative abilities, and analytical skills to frame and solve management problems;
- have strong communication skills;
- use information technologies to improve individual and organizational performance;
- have a sense of history, familiarity with great world literature and an understanding of global economic, political and technological developments;
- appreciate the diversity of cultures, values and ideas.

During their first two years, students build the conceptual and analytical base for studying the art and science of management. They partially complete general education requirements and learn required skills for upper level business courses. Students take business field courses and business discipline concentration courses in their junior and senior years.

The School of Business Administration cooperates with the College of Engineering and Mathematics in offering a B.S. in Engineering Management.

The undergraduate and graduate programs offered by the School are accredited by AACSB International: The International Association to advance collegiate schools of business.

The offices of the School of Business Administration are located in Kalkin Hall.

DEGREE PROGRAM

Bachelor of Science in Business Administration – with concentrations in:

Accounting	International Management
Finance	Management and the Environment
Marketing	Management Information Systems
Entrepreneurship	Production and Operations
	Human Resource Management

DEGREE REQUIREMENTS

Students must comply with the degree requirements as stated in a single catalogue edition in place during the time they are enrolled. The catalogue to be followed is the one in effect at the time a student enrolls at UVM, unless the student requests in writing to follow a catalogue that is published subsequently during their enrollment at UVM. Students who have a separation from the University of three years or more must meet the requirements of the current catalogue at the date of readmission.

A minimum of 122 approved semester hours is required for the degree of Bachelor of Science in Business Administration. At least 50% of course work must be taken in subjects that are not business or upper level economics. A cumulative grade point average of 2.0 is required. Additional grade requirements exist for basic business core, business field, and business discipline concentration courses.

Students must complete 30 of the last 45 hours of credit in residence at UVM as a matriculated student.

Academic Standards

Students will be placed on trial if their semester or cumulative average is less than 2.0. They will remain on trial until both semester and cumulative averages reach at least a 2.0, or until they are dismissed.

Full-time students are eligible to be dismissed in three situations: (1) failure of at least half of their course credit for any semester; (2) three successive cumulative grade-point averages below a 2.0; (3) two successive semester averages below a 2.0. (For dismissal purposes, part-time students' semester averages are calculated using at least 12 consecutive credits. Also, cumulative grade-point averages will not be considered as a basis for dismissal until at least 12 credit hours have been completed, unless over half of courses attempted are failed.)

A student eligible to be dismissed will be dismissed unless there are circumstances supporting an extension of trial status.

BUSINESS COURSE REQUIREMENTS

Basic Business Core

(24-26) credit hours)
To be completed by the end of the sophomore year with a grade-point average of 2.0.

Math 19 and 20; or Math 21
Economics 11 and 12
Statistics 141
BSAD 40, 60, 61

Business Field Courses

(24 credit hours)
To be completed beginning junior year, with a grade-point average of at least 2.0.

Quantitative Methods, BSAD 120, 132, 141, 150, 173, 180, 191.
Students must have junior status and have completed the Basic Business Core before taking Business Field courses.
The Quantitative Methods course is selected from among BSAD 170, 174, 177, 178, 266, 270, 272, or Statistics 151, 195, 201, 221, 223, 224, 225, 231, 233, 237 or 253. BSAD 191 is taken in the senior year.

Business Discipline Concentration

(at least 12 credits)
To be completed with a grade point average of at least 2.0

The student must complete at least 12 hours in Business Administration courses numbered 100 or above beyond those required for the Business Field courses. One approach is to concentrate these courses in one of the areas of Accounting, Entrepreneurship, Finance, Human Resource Management, Management and the Environment, Management Information Systems, Marketing, International Management, or Productions and Operations Management. Students may also complete a self-designed program.

The specific requirements for each Discipline Concentration are available from the Student Services Office in 218 Kalkin Hall. A faculty member teaching in the discipline of the concentation must approve any exception to these requirements.

GENERAL EDUCATION REQUIREMENTS

The General Education Requirement framework is based on six field blocks.

The Six Fields are:

1. **Arts and Humanities –** Art, Classics, Film, History, Music, Philosophy, Religion, Theatre.
2. **Writing and Speaking –** English courses in writing and offerings in Speech.
3. **Social Sciences –** Anthropology, Environmental Studies, Geography, Political Science, Psychology, Sociology, Women's Studies.
4. **Natural Sciences and Mathematics –** Biology, Botany, Chemistry, Environmental Science, Geology, Computer Science, Mathematics, Statistics, Physics.
5. **Area and International Studies –** African Studies, Asian Studies, Canadian Studies, European Studies, Latin American Studies, Middle East Studies, Russian/East European Studies.
6. **Language and Literature –** Chinese, American Sign Language (in CMSI), English Literature, French, German, World Literature, Greek, Italian, Japanese, Latin, Russian, Spanish.

Basic General Education Core

(18-20 credit hours)

Six courses. One from each of the following:

1. United States or Global History from History 9, 10, 11, 12, 19, or 68.
2. English course that emphasizes practice in writing from English 1, 50, 53, 120.
3. Social Science from any discipline in field 3 above.
4. Natural Science that includes a laboratory or field experience from Astronomy 5 and 23, 5 and 24; Biology 1, 2; Botany 4; Chemistry 20, 23, 31, 35; Geology 1, 4, 55; Natural Resources 1; Physics 11 and 21, 31 and 21.
5. Area and International Studies from any discipline in field 5 above.
6. Language or Literature from any discipline in field 6 above.

Cross-listed courses may count for only one Basic General Education Core requirement.

General Education Field Concentration

(at least 12 credit hours)

Students must complete at least 12 credits in any one of the six general fields listed above. They may take any combination of courses within the field. For example, in the Social Sciences field, two Political Science courses, a Sociology course and a Women's Studies course might make up the field concentration.

One course from the Basic General Education Core may be used as one of the General Education Field Concentration courses.

History of Science (HST 85, 86) can count toward General Education Field Concentrations in either field 1 or field 4.

General Education Discipline Concentration

(at least 12 credit hours)

Students must accumulate 12 credits in a single discipline. The discipline may **not** be in the field chosen for the general education field concentration. Community Development & Applied Economics, and ECON, may not be chosen as the discipline concentratiion.

Disciplines are specific academic areas, not broad fields. For example, Religion is a discipline in field 1. If Religion is chosen, the student may not include Philosophy and Art classes, even though they are in the same field.

One course from the Basic General Education Core may be used as one of the General Education Discipline Concentration.

As a general rule, two discipline concentration courses must be numbered 100 or higher. Exceptions: (1) if a language is chosen, at least one course must be numbered 51 or higher; (2) if Mathematics or Computer Science is chosen, at least two courses must be numbered 21 or higher; (3) if a Natural Science is chosen, there is no restriction on course level.

Caution: In some disciplines, there may not be sufficient courses or space in courses for a discipline concentration to be an option. Currently these include, but may not be limited to, Speech, Studio Art, and American Sign Language. Check with the department if there are any questions.

Students may submit a petition to the Undergraduate Studies Committee to seek approval on an exception basis to pursue a self-designed General Education Discipline Concentration. The petition should provide a rationale for the combination of courses proposed. Submit petition in 101 Kalkin Hall.

Race Relations and Ethnic Diversity in the U.S. (3 credit hours)

One three-credit course that addresses the question of race relations and ethnic diversity in the U.S. Courses that fill this requirement are approved by the College of Arts and Sciences. The course selected to satisfy this requirement may also be used to fulfill another general education requirement. Otherwise, an elective course must be used to meet the requirement.

Physical Education (2 credit hours)

All students are required to complete two credits in Physical Education Activities. No more than two credits will count toward the 122 hours required for graduation. Students who enter the University at age 25 or older may waive the two credits of PEAC.

Electives

General Education Electives

Students will take additional courses in subjects so that at least half of their course work is outside of Business Administration and Upper-level (100 level or above) Economics.

Other Electives

Students take additional electives, either inside or outside of Business to achieve the total 122 credit hours required for their degree.

Restrictions on Electives

1. No credit will be granted for a course that is assumed prerequisite knowledge for a course previously completed.
2. No credit will be granted for a course that substantially duplicates material in courses offered in Business Administration or in other previously completed courses.
3. No credit will be granted for Physical Education credits beyond the two credits that are required.

COURSE OF STUDY

Here is *one* illustrative schedule for the program.
(Numbers shown are credit hours.)

	Fall	Spring
FIRST YEAR		
MATH 19, 20	3	3
EC 11, 12	3	3
BSAD 40	3	–
General Education Courses	6–7	9-10
	15-16	15-16

	Fall	Spring
SOPHOMORE YEAR		
BSAD 60, 61	4	4
STAT 141	–	3
General Education Courses	12-13	9-10
	16-17	16-17
JUNIOR YEAR		
Business Field Courses	9	9
General Education or Electives	6	6
	15	15
SENIOR YEAR		
Business Discipline Concentration Courses	6	6
General Education or Electives	9	6
BSAD 191, Business Policy	–	3
	15	15

SPECIAL PROGRAMS

Professional Accounting Program

Students planning to sit for the CPA examination should complete the Professional Accounting Program: BSAD 17, 18, 161, 162, 164, 168, 266, 267. Completion of the Professional Accounting Program satisfies the Business Discipline Concentration requirement. BSAD 266 may be used to satisfy both the Quantitative Methods requirement and the Professional Accounting Program requirement.

Completion of the professional accounting program fulfills the academic requirements to sit for the CPA examination in the State of Vermont. The requirements to sit for the CPA examination vary among states, therefore students who plan to sit for the examination in a state other than Vermont are advised to contact the state's Board of Accountancy to obtain current requirements. (See http://www.aicpa.org for addresses and additional information).

International Management

Students interested in International Management are expected to spend the spring semester of their junior year studying abroad.

The University has formal arrangements with universities in Grenoble, France, and Vienna, Austria. Courses are taught in English.

It is also possible for students to spend a semester at other international universities. International Management students need to complete BSAD 120, 150, and 180 before going abroad.

Preprofessional Work Programs

Students are encouraged to participate in preprofessional work opportunities. These opportunities include internships and cooperative education (CO-OP) programs. For both of these programs students must first successfully complete the Basic Business Core.

Cooperative Education CO-OP opportunities are coordinated and supervised through Career Services. If a full-time CO-OP work experience is done during a regular semester, students will need to take classes in a summer session.

Internships Internships may involve part-time work during the academic year, or summer work. The time required of an internship and whether or not it is a paid experience depends on the employer.

Credit may be available for demonstrated academic learning in relation to a preprofessional work experience. A faculty member in each area of business will be designated each semester to work with students and grade the written assignments. To enroll for credit, students must have a minimum of junior standing, completion of Basic Business Core, a related Business Field Course with a grade of B, and a cumulative grade-point average of 3.0. If these requirements are met, students should talk with the assigned faculty member in their field of study to discuss the written assignments required for credit and to obtain approval. Once the internship is approved, students must enroll in BSAD 194 to receive internship credit. Business students may not earn Business practicum or internship credit through other academic units.

MINORS

Students Majoring in Business

Students majoring in Business Administration are not required to have a minor to meet degree requirements; however, a business student may choose to have a minor outside of Business. The department issuing the minor sets the requirements and determines if the student is eligible to minor in their program. The student must contact the appropriate department to obtain more information.

Non-Business Students

Two different minors are available in the School of Business Administration for non-business majors: Business or Accounting. An application is required and may be obtained at the Student Services Office, 218 Kalkin Hall. Acceptance into the minor program requires completion of the prerequisite courses with a GPA of 2.0 or better in these courses. Admission may be more restrictive if applications exceed the capacity of the program.

Prerequisites: Economics 11, Economics 12, Mathematics 13, 19 or 21, Statistics 111 or 141. Students must have basic microcomputer literacy, including a working knowledge of word processing and spreadsheet software. Students lacking this basic knowledge are responsible for attaining it through course work, self study, tutorials, or workshops.

Business Minor Requirements:

Accounting: BSAD 60 and 61 *or* BSAD 65.

Other Business requirements: Three business field courses (numbered 100–299), at least one of which must be from the following list: BSAD 120, 132, 141, 150, 173, or 180.

One year MBA opportunity: A student minoring in Business Administration may complete an MBA at UVM in one year after earning a bachelor's degree if: (1) BSAD 60 and 61 are completed; (2) three of BSAD 120, 132, 150, 173, and 180 are selected to meet the minor requirement; (3) the other two courses on this list are taken as electives; and (4) the student applies and is admitted to the MBA program under regular criteria.

Accounting Minor Requirements:

Introductory Accounting: BSAD 60 and 61 *or* BSAD 65. Students must earn at least a 2.0 in *each* introductory accounting course taken to continue with an accounting minor. If a 2.0 is not achieved, a student may switch to a general Business Minor.

Upper Level Accounting Requirements: BSAD 161, 162, 164, and 168. A student must earn a 2.0 average in these four courses to earn an accounting minor.

TRANSFER TO BUSINESS ADMINISTRATION

Students planning to transfer to the School of Business Administration from another college or school on campus must comply with the Intercollege Transfer policy. Applications may be obtained in the Student Services Office at 101 Kalkin Hall.

The School of Natural Resources

In the School of Natural Resources, excitement for discovery and a commitment to life-long learning are central. Our emphasis on the integration of natural science and cultural perspectives reflects the interdisciplinary context in which ecosystem management, resource planning, and environmental concerns must be addressed. We believe that there is a strong interplay between teaching and scholarship and that each is vital to the other.

The School of Natural Resources seeks to cultivate an appreciation and enhanced understanding of ecological and social processes and values aimed at maintaining the integrity of natural systems and achieving a sustainable human community. We pursue this goal by generating and broadly disseminating knowledge and by challenging students, colleagues, and citizens to acquire knowledge, skills, and values to become innovative, environmentally responsible, and accountable leaders.

We are actively committed to diversity - biodiversity in natural communities and cultural diversity in human communities. Individual and professional responsibility, as well as scholastic excellence, are emphasized within the School's supportive atmosphere. Faculty members are conscientious advisors, and students communicate frequently with them for guidance in clarifying educational, career, and personal goals. While these programs prepare students for a variety of positions in natural resources and the environment, graduates are also well prepared to pursue careers or advanced study in other professions.

The Office of the Dean of the School is located in the George D. Aiken Center for Natural Resources.

DEGREE PROGRAMS AND OPTIONS

The Bachelor of Science degree is awarded for the following programs:

- Environmental Sciences
  - *Agriculture and the Environment*
  - *Conservation Biology and Biodiversity*
  - *Ecological Design*
  - *Environmental Analysis and Assessment*
  - *Environmental Resources*
  - *Water Resources*
- Environmental Studies
- Forestry
- Natural Resources
- Resource Planning
- Resource Ecology
- Integrated Natural Resources
- Recreation Management
  - *Private Outdoor Recreation and Tourism*
  - *Public Outdoor Recreation*
- Wildlife and Fisheries Biology
  - *Fisheries Biology*
  - *Wildlife Biology*

Undecided: Students interested in studying the environment and natural resources, but who wish to postpone their decision on a specific major, enroll in Undecided-Natural Resources.

Honors Program and Aiken Scholars

The SNR Honors Program is a two- or three-year experience that students are invited to join based on their academic performance at the University. Selection is based on either achievement of Dean's List for two semesters and a minimum cumulative GPA of 3.2 or nomination by a faculty sponsor. At minimum, SNR Honors students participate in onean honors seminar course during the spring semester of their sophomore year, enroll in a research methods course in the junior year, and conduct an independent or team research project under the guidance of a faculty member during their senior year. Their projects provide valuable experience in designing, implementing, and reporting results of research.

Aiken Scholars: Students with outstanding high school records are admitted to the School of Natural Resources as Lola Aiken Scholars and invited to participate in a special fall seminar open to Aiken Scholars only. Those who then achieve Dean's List for fall semester are automatically nominated by the dean for the SNR Honors Program.

Internships and Cooperative Education

Experiential learning is encouraged. The School offers students assistance in securing summer, part-time, and permanent employment in natural resources fields. Well-developed internship and cooperative education programs award academic credit for contracted work experiences. These opportunities to explore and confirm career interests, to develop professional contacts and exposure, give graduates a competitive edge when they enter the job market.

Travel Courses and Field Studies

The School of Natural Resources relies heavily on Vermont's natural landscapes - its mountains, lakes, fields, and forests - to provide students hands-on experience studying ecology and ecosystem processes. In addition, SNR offers a variety of intensive field courses during vacation breaks and summer session that provide students special opportunities to study the ecology of the Great Smoky Mountains and coastal plain of the southeastern U.S. (FOR 126), wildlife of Florida or south Texas (WFB 176/177), environmental research in the Chesapeake Bay region (ENSC 185), ecotourism and environmental interpretation in Costa Rica or Sub-Saharan Africa (RM 188), regional examples of sustainable forest management and practices (FOR 185) and the aquatic ecology of large lakes (NR 255) from the deck of the Melosira, UVM's research vessel.

Accelerated Master's Program

This program affords Forestry students interested in Public Forest Administration the opportunity to obtain both an under-graduate B.S. degree in Forestry and a Master's in Public Administration degree in a total of five years, rather than the traditional six-year minimum. Further information is available from the offices of the Forestry Program and the MPA Program.

DEGREE REQUIREMENTS

Students must be matriculated in the School of Natural Resources and in residence at The University of Vermont during the period in which they earn 30 of the last 45 hours of academic credit applied toward the degree.

Students must earn a cumulative grade-point average of 2.0 or above.

Students must complete a program of study which includes:

1. SNR core curriculum.
2. SNR general education courses.
3. SNR major requirements.
4. University requirement in Physical Education Activities (two credits).

SNR CORE CURRICULUM

SNR's core curriculum provides a common environmental and natural resources experience for all students. The innovative seven-course sequence creates an integrated foundation upon which the individual majors in the School are constructed. Core courses focus on the underlying fundamentals from which natural resources disciplines have evolved and the application of these fundamentals to problems or issues in the natural world and society. The core courses also promote development of thinking, communications, problem solving, and analytical skills. Faculty from all undergraduate programs teach in the core.

The SNR core curriculum represents a body of knowledge, skills, and values that the faculty believe is central to the study of natural resources and the environment. Seven courses are required:

	Hours
Nat. Res. 1, Natural History and Field Ecology	4
Nat. Res. 2, Nature and Culture	3
Nat. Res. 103, Ecology, Ecosystems and Environment	3
Nat. Res. 104, Social Processes and the Environment	3
Nat. Res. 105, Environmental Problem Analysis	1
Nat. Res. 205, Ecosystem Management: Integrating Science, Society, and Policy	3
Nat. Res. 206, Environmental Problem Solving and Impact Assessment	4
	21

NR 1 and NR 2 provide an introduction to the study of natural resources and the environment from natural and social science standpoints, respectively. At the completion of these courses, students should (1) have a basic understanding of the School's integrated approach to natural resources and the environment, (2) be better prepared to make informed decisions about their academic majors, and (3) be prepared to advance to an intermediate level of study in natural resources. The intermediate courses in the sequence, NR 103 and NR 104, emphasize ecosystems and social systems, respectively. They are linked through a one-credit interdisciplinary problem analysis module, NR 105. The last two courses focus directly on integrated and holistic management. In NR 205, students integrate natural and social science to understand environmental management principles and policies. In NR 206, the capstone course taken senior year, students are challenged to synthesize and apply the interdisciplinary knowledge, skills, and values they have learned to contemporary natural resources and environmental issues.

GENERAL EDUCATION COURSES

SNR general education requirements are designed to enhance a student's ability to assimilate and analyze information, think and communicate clearly, and respect multiple perspectives. These requirements are flexible in order to encourage creativity in meeting educational goals. Two sets of courses are stipulated:

Five courses in required areas:

1. Writing - English 1, 50, or 53
2. Speaking - Speech 11, Theatre 5, AGRI 183, or NR 185 (Speaking & Listening)
3. Race and Culture - NR 6 or EDSS 11
4. Mathematics - Math. 9 or higher (but not Math. 17) *Choice varies depending on major.
5. Statistics - NR 140, Statistics 111, 141, or 211 *Choice varies depending on major.

Three courses in a self-design sequence:

Each student defines a personal learning objective and selects at least 9 credits from departments outside SNR to meet that objective. This sequence of courses must be approved in advance* .

*Before completion of four semesters or 60 credit hours; time-frame may be extended for transfer students.

MAJOR REQUIREMENTS

Environmental Sciences

The Environmental Sciences major provides students with the fundamental knowledge and hands-on experience to identify, analyze, and solve "real world" environmental problems arising from human activities.

A total of 122 credits are required for the degree. Required courses: BIOL 1, 2; CHEM 31, 32; **CHEM 42; GEOL 55 or PSS 161; *MATH 19, 20 (or 13, 14); *NR 140 or STAT 141; ENSC 1, 101, 130, 201, 202; 14 credits in one of the following advising tracks - Water Resources, Environmental Analysis and Assessment, Ecological Design, Agriculture and the Environment, Conservation Biology and Biodiversity, or Environmental Resources. Students may also elect a self-designed track in a particular area of interest.

**Students interested in areas such as environmental analysis and assessment should consider taking more advanced courses, such as CHEM 141/142.

Environmental Studies

Environmental Studies is an interdisciplinary major which combines required core courses with a self-designed program of study chosen to meet individual learning goals. The Environmental Studies core courses include perspectives of the sciences, social sciences, and humanities in local, national, and global contexts.

A total of 122 credits are required for the degree.

Required courses: ENVS 1, 2, 151, 201, 202; 30 hours of approved environmentally-related courses* at the 100 or 200 level, including three hours at the 200 level, with at least one course in each of four areas - natural sciences, humanities, social sciences, and international studies (may be fulfilled by a study abroad experience).

Forestry

The Forestry major provides students with an education in ecologically responsible forestry, emphasizing the complex landscapes of the northeastern United States. Students develop their abilities to coordinate and manage all aspects of sustainable forestry through an education that combines a strong foundation in natural and social sciences with hands-on field-based classes, internships, research experiences, and forest management projects. The curriculum is integrative, technologically current, science-based, and is accredited by the Society of American Foresters.

Students supplement a core of required Forestry and related courses with a student-proposed, faculty-approved area of concentration[1] such as forest ecosystem health, forest ecology, consulting forestry, public forest administration,

or international development. The concentration represents at least 12 credit hours and may be self-designed[2], an appropriate University minor, or a natural resource oriented study abroad experience.

A total of 126 credits are required for the degree.

Required courses: BOT 4; CHEM 23; *MATH 18; NR 25, *140, 224; PSS 161; FOR 21, 73, 81[3], 121, 122**, 158, 182, 223, 272; a course in forest health***; 12 additional credits in area of concentration.

[1]Must be endorsed by the student's advisor and approved by the Forestry faculty prior to the last four semesters of study.
[2]At least 12 credits are to be at the 100-level or higher.
[3]Transfer students with 45 or more credit hours are exempt from FOR 81.
* Also fulfills SNR general education requirement.

** Field intensive course offered only during the summer session.

Natural Resources – *Resource Planning*

The Resource Planning curriculum provides fundamental understandings of interactions among individuals, communities, and society with nature, resources, and the environment. It allows students to select courses around specific individual interests such as natural resource planning and community, policy and economic dimensions of resource planning, and international dimensions of resource planning.

A total of 122 credits are required for the degree.

Required courses: PSYC 1; CDAE 2; POLS 21 or 41; SOC 1 or 11; PHIL 4 or CDAE 156; ANTH 21 or GEOG 1; EC 12 or CDAE 61. 27 additional credits in Option Electives to be chosen from approved list in consultation with student's academic advisor. Any course substitution request must be approved **prior to the end of the add/drop period** for the semester in which the student enrolls in the substitute course.

Natural Resources – *Resource Ecology*

The Resource Ecology curriculum explores the biology and ecology of plants and animals in both aquatic and terrestrial systems and allows students to select courses around specific individual interests.

A total of 122 credits are required for the degree.

Required courses: BIOL 1,2; GEOL 1 or PSS 161; *MATH 13 or 19; *NR 140; CHEM 23 or CHEM 31,32; CHEM 26 or CHEM 42 or CHEM 141,142; NR 25; NR 143 or FOR 146; PHYS 11 or 31; 24 additional credits in Option Electives to be chosen from approved list in consultation with student's academic advisor. Any course substitution request must be approved **prior the end of the add/drop period** for the semester in which the student enrolls in the substitute course.

* Also fulfills SNR general education requirement.

Natural Resources – *Integrated*

Integrated Natural Resources (INR) is a self-designed major. INF is the right choice for students who have strong interests in natural resources and the environment, clear academic direction, and the motivation to develop a well-focused, personally meaningful course of study. Working closely with a faculty advisor, the student builds on a solid foundation of natural resources courses to create an individualized program that combines course work from disciplines within and outside the School.

A total of 122 credits are required for the degree.

Required courses (minimum nine credits): Students elect from a list of approved courses at least one course in each of three areas - *biology/ecology; NR courses in social sciences and communications; and quantitative and analytical methods.* These courses are in addition to those taken to fulfill SNR general education requirements.

Individualized Program of Study Option (minimum 39 credits); The student develops an individualized Program of Study composed primarily of intermediate-level School of Natural Resources courses (ENVS, ENSC, FOR, NR, RM or WFB prefix). This may include no more than 15 credits outside the School and no more than 6 credits below the 100-level. With careful selection of courses, students develop concentrations such as **Solid Waste Management, Environmental Education, Resource Management, Resource Planning, Resource Conservation, International Resource Issues,** and **Resource Spatial Analysis.** All programs of study must be endorsed by the advisor, then approved by the faculty. If not approved, the student may not continue in the INR option and must seek another major. The program of study is to be completed by the end of the sophomore year (60 credits). Transfer students with more than 60 credits must have a program of study approved as part of the transfer application. It is expected that transfer students will be active in the program for at least two years (four semesters) after transferring into the INR option. Any course substitution request must be approved prior to the end of the add/drop period for the semester in which the student enrolls in the substitute course.

Recreation Management

The Recreation Management major integrates the study of environmentally based tourism and hands-on management of outdoor recreation resources. Students may major in ***Public Outdoor Recreation*** or ***Private Outdoor Recreation and Tourism.*** Public recreation resources include parks, forests, wilderness areas, and other outdoor recreation environments at the local, regional, state, and federal government levels. Private resources include ski areas, campgrounds, resorts, and other natural resource-based recreation facilities. The program permits specialization in several types of private recreation businesses, including ski resorts.

A total of 126 credits are required for the degree.

Courses required for all Recreation Management majors:

- One course in humanities (History, Philosophy, Religion, Classics)
- One course in communications (Art, Music, Theater, Art History, foreign language, English literature)
- One course in social sciences (Anthropology, Economics, Geography, Political Science, Psychology, Sociology)
- One laboratory course in natural sciences (Biology, Physics, Chemistry, Botany, Zoology, Geology)

Private Outdoor Recreation and Tourism option: Required courses: RM 1, 50, 157, 158, 191, 230, 258; three courses selected from RM 138, 153, 235, 240, 255; and nine additional credits of professional electives to be chosen from approved list.

Public Outdoor Recreation option: Required courses: RM 1, 138, 153, 191, 235, 240, 255; three courses selected from RM 50, 157, 158, 230, 258; and nine additional credits of professional electives to be chosen from approved list.

Wildlife and Fisheries Biology

The areas of wildlife biology and fisheries biology deal with the management and conservation of animal populations that range from species that are common enough to be hunted/fished to species that are endangered. Management

strategies may include manipulation of populations directly or indirectly through alteration of habitat. Courses emphasize applied ecology and provide hands-on experience in labs and field trips. All Wildlife and Fisheries Biology majors complete the same core of courses during the first year. As sophomores, students elect either the Wildlife Biology or the Fisheries Biology option. Required courses in the major satisfy educational requirements of the U.S. Office of Personnel Management for entry-level positions in these fields.

A total of 122 credits are required for the degree.

Courses required for all majors: *MATH 13, 19, or 21; *NR 140; BIOL 1, 2; CHEM 23; CHEM 26 or 42; BIOL 101 or BOT 132; NR 25; FOR 121; GEOL 1 or PSS 161; WFB 161, 174.

Wildlife Biology option: Required courses: FOR 21; WFB 130, 131**, 150**; BOT 109; BIOL 217; three courses (one must have a lab) selected from NR 224; WFB 271/272, 273/274, 275, or 279.

Fisheries Biology option: Required courses: PHYS 11/21 or 12/22 or PHYS 96, Green Mountain Physics; WFB 232; NR 250/251; NR 260/WFB 272; NR 270 or WFB 279; six additional hours selected from NR 270, NR 280, BIOL 264, BOT 234, WFB 271, WFB 279, WFB 286.

* Also fulfills SNR general education requirement.

** Field intensive courses offered only during the summer session.

MINOR REQUIREMENTS

The Bachelor of Science degree in Natural Resources does not require completion of a minor. However, many students in the School of Natural Resources do complete minors, either within the School or in other departments across campus. Interested students should contact the chair of the minor program or department.

Environmental Studies: The minor requires 17 credit hours of Environmental Studies courses consisting of 1, 2, and nine hours at the 100-level or above, including three hours at the 200-level. Of the nine hours, one non-ENVS course at the appropriate level may be substituted with approval of the student's advisor and the Environmental Program.

Forestry: Applications for the minor must be filed no later than June 1 of the year preceding graduation. A minimum of 16 credit hours is required, with at least nine at the 100-level or higher.

Required courses: FOR 1* or 73; FOR 21; additional FOR courses to total 16 credits.

*Students in the School of Natural Resources may not count FOR 1 towards completion of a Forestry minor.

Recreation Management: The minor requires a planned course of study which will provide a substantive introduction into the field of recreation management. Interested students should contact the Program Chair. A total of 15 credit hours are required. A minimum of nine credits are to be selected from RM 1, 50, 138, 153, 157, 158, 181. A minimum of six credits are to be selected from RM 230, 235, 240, 255, 258, 282.

Wildlife Biology: Applications for the minor must be filed no later than June 1 of the year preceding graduation or of the completion of the requirements for the minor. A minimum of 15 credit hours is required in prescribed and elective courses. Required courses: WFB 130, WFB 174; WFB 271 or 273. Elective courses: WFB 131, 150, 176, 185/186, 187/188, 272, 273, 274, 275, 279, 285/286, 287/288; NR 224.