

College of Agriculture and Natural Resources

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In 1862, Congress passed the Morrill Land Grant Act providing grants of federal land to each state. Funds from the sale of these lands were used in establishing a college teaching agriculture and related subjects in each state. Subsequent federal acts have enlarged the responsibilities of these colleges. Today they continue to serve agriculture and society in many ways through a variety of educational programs. The University of Connecticut is the land-grant university in Connecticut. The College of Agriculture and Natural Resources offers instruction at both undergraduate and graduate levels. Research and experimental work is carried on through the Storrs Agricultural Experiment Station. Educational and service programs are conducted throughout the State by the Cooperative Extension System. The College of Agriculture and Natural Resources is supported by both federal and state appropriations and contributions from the private sector.

Agriculture has evolved to engage scientists concerned with food, people, and health in a manner that is economically viable and environmentally sustainable. The College of Agriculture and Natural Resources maintains strong programs in fields such as agricultural biotechnology, allied health sciences, cloning, diagnostic and environmental sciences, health promotion, landscape architecture, medical laboratory sciences, nutritional biochemistry, pathobiology, pre-veterinary study, resource economics, and wildlife management.

The College has extensive facilities and operations to supplement and enhance instruction, learning experiences, and research. Laboratories, plants, animals, greenhouses and other related resources – both on and off campus – allow students to apply knowledge and skills in real-world, professional environments. The Agricultural Biotechnology complex, Center for Land Use Education and Research, Center for Environmental Health, Connecticut Institute of Water Resources, Connecticut State Climate Center, Food Marketing Policy Center, and the Wildlife Conservation Research Center are all integral components of the College of Agriculture and Natural Resources.

The following departments offer undergraduate instruction in the College: Agricultural and Resource Economics, Allied Health Sciences, Animal Science, Natural Resources and the Environment, Nutritional Sciences, Pathobiology and Veterinary Science, and Plant Science. The Directory of Courses section of this *Catalog* describes the course offerings of these departments. Other courses are offered under the departmental listing Agriculture and Natural Resources.

The four-year curriculum leads to the Bachelor of Science degree.

Admission Requirements. Students may enter the College of Agriculture and Natural Resources directly upon admission to UConn as a freshman or transfer student. New students who select Allied Health Sciences will be admitted as Allied Health Sciences majors and advised by the Department of Allied Health Sciences. Professional majors in the Department of Allied Health Sciences (Dietetics, Diagnostic Genetic Sciences, and Medical Laboratory Sciences) are competitive junior/senior year programs with additional admission procedures and requirement as outlined below.

See Admission to the University and New England Regional Student Program.

Scholarships. Over \$450,000 in scholarships and awards are available to students in the College of Agriculture and Natural Resources.

Advisors Assigned by Major: Departmental Advisors are assigned to students upon entry into the College of Agriculture and Natural Resources according to a student's major and area of special interest. Advisors assist students in the selection of appropriate courses and help them develop an individualized program of study that will meet educational and career goals. The office of the Associate Dean for Academic Programs and the Academic Advisory Center of the College of Agriculture and Natural Resources also support students and advisors.

Bachelor's Degree Requirements

Upon recommendation of the faculty the degree of Bachelor of Science is awarded by vote of the Board of Trustees to students who have met the following requirements: (1) earned a total of 120 degree credits; (2) earned at least a 2.0 cumulative grade point average for the number of calculable credits for which they have been registered; (3) earned at least a 2.0 cumulative grade point average for all courses included in the 36 credit numbered 2000 or above requirement for the major; (4) met all the requirements of the University of Connecticut, the College of Agriculture and Natural Resources, and their individual major as outlined below.

General Education Requirements

All students in the College of Agriculture and Natural Resources must meet the University-wide General Education Requirements (GER) as described in the "Academic Regulations" section of this *Catalog*.

Science and Mathematics Requirements

Students in the College of Agriculture and Natural Resources must pass at least two courses in Content Area 3, including at least one course from the list of four-credit laboratory courses; and at least two Quantitative (Q) courses, including at least one course in Mathematics or Statistics. Ordinarily, these requirements will be met by completing University general education courses and/or courses required by the Major. However, if a student receives a waiver from general education courses (e.g. based on completion of a previous baccalaureate degree) he or she must still complete the science and quantitative courses, as listed above.

36 Credit Requirement for All Majors

Students in all majors of the College of Agriculture and Natural Resources must successfully complete at least 36 credits of courses **numbered 2000 or above** in or relating to their major. Courses for this 36 credit group may be taken from specific major requirements (as listed below for some majors), or may be selected according to a student's individual educational and career goals. This group of courses must:

1. be numbered 2000 or above
2. be approved by the student's advisor and department head
3. **include at least 30 credits** ~~be~~ taken at the University of Connecticut
4. be taken in two or more departments
5. include at least 15 credits from departments in the College of Agriculture and Natural Resources, **which must be taken at the University of Connecticut**
6. have a combined grade point average of at least 2.0
7. not include more than 6 credits (combined) of independent study, internship, or field studies (**if included, these credits must be taken at the University of Connecticut**)
8. not be taken on Pass/Fail
9. not include more than 6 credits of S/U coursework

Plan of Study

Students should work closely with their advisors to review requirements, recommended courses, and career goals. Each student should prepare a tentative plan of study, outlining all courses, with an academic advisor as early as possible, but in no case later than at the start of the junior year. A final plan of study, approved by the major advisor and the department head, must be filed with the Degree Auditor no later than the end of the tenth week of the semester prior to graduation. Professional majors in the Department of Allied Health Sciences do not require a plan of study.

Specific Course Requirements for Individual Majors

Students must complete specific courses for individual majors as outlined below. Many courses may be used to meet more than one requirement.

Undergraduate Majors

Students in most majors have a great deal of latitude in the choice of courses and may emphasize a range of options to meet personal objectives. Students may prepare for career opportunities in such diverse activities as research, production, distribution, business and industry, public service, health sciences, professional service, education, communications, product development, international development, environmental protection, and community resource development. In addition to formal course work students may participate in independent study projects, field internships, cooperative education, and practicums. Students may

also prepare for formal education beyond the Bachelor of Science degree.

Advisors are available to discuss requirements, recommended courses, and career opportunities of the various majors with current and prospective students.

Agricultural Education

Individuals preparing for a career in Agricultural Education obtain content area expertise by selecting a major and starting in the College of Agriculture and Natural Resources. Certification requirements and a Masters degree in Agriculture Education will be completed in the Neag School of Education.

Students interested in agricultural education should refer to the Neag School of Education section of this *Catalog*.

Agriculture and Natural Resources

This interdisciplinary major is designed for students who want broad training in agriculture and natural resources. Students work with their advisors to develop a personalized program of study.

To satisfy the general education requirement for the computer technology competency, Agriculture and Natural Resources majors must meet the University's entrance expectations. They will not have to meet any advanced requirement for computer technology.

To satisfy the general education requirement for information literacy, students must pass ENGL 1010 or 1011 and one course approved for information literacy in any department of the College of Agriculture and Natural Resources.

To satisfy the general education requirement for writing in the major, students must pass one approved 2000-level or above W course in any department of the College of Agriculture and Natural Resources.

A minor in Agricultural Biotechnology is described in the "Minors" section.

Allied Health Sciences

The Allied Health Sciences major with or without a concentration leads to a Bachelor of Science degree.

Admission - General

Freshmen are admitted into the Department of Allied Health Sciences as Allied Health Sciences (AHS) majors. Students are advised in the Department of Allied Health Sciences. During the spring of their sophomore year or after completion of a minimum of 45 credits, students may remain an Allied Health Sciences major, may further define their major by petition into a concentration within the Allied Health Sciences major, or apply to a Professional Program (admission to a concentration within the AHS major or to a professional program is not automatic; refer to respective program admission information).

Students not admitted to the University as Allied Health Sciences majors may petition into this major during the first two weeks of each semester (does not apply to professional program application; see professional program admission information).

Students who apply to the Allied Health Sciences major as a *second major* for additional degree or double major will be subject to department review and admission decision consistent with the admission requirements.

University readmission applicants who declare the AHS major will be subject to department review and admission decision consistent with the procedure applied to current non-AHS students petitioning to the major.

Students who petition to the Allied Health Sciences major with admission requirement coursework in transfer must provide the department with an official transcript as part of their petition documentation.

The following petition requirements must be met for consideration of a **major** change into the Allied Health Sciences major:

- 1) Be in good academic standing (not on probation or eligible for dismissal).
- 2) A minimum cumulative GPA of 2.2 required to declare a concentration within the AHS major.
- 3) Successful completion of AH 1100 with a grade of C or better.
- 4) Competitive admission with a minimum math and science GPA (smGPA) of 2.5.
- 5) Math and Science GPA must include at least one each of the following with no grades less than a C (no substitutions).
 - a. CHEM 1122 or 1124Q or 1127Q

b. BIOL 1107 or 1108

c. MATH 1040Q or 1060Q or 1125Q, or higher; or STAT 1000Q or 1100Q

6) Advanced science course work completed (2000-level and above) with grades less than a C may be cause for denial of admission.

Students petitioning their junior or senior year may require an additional semester or longer to complete requirements depending on how their coursework meets program requirements and course availability at time of registration. Please contact the department for questions as they relate to admissions.

The **Allied Health Sciences** major, taken with or without the concentrations in Health Sciences, Health Promotion Sciences, or Occupational Safety and Health is designed specifically for students who would like to pursue a broad-based baccalaureate degree in Allied Health or who would like to pursue *graduate* health programs that require a baccalaureate degree for admission. Working with an advisor, students design a flexible plan of study that they can tailor to meet their professional and personal goals. Students combine university general education and required coursework in Allied Health with coursework from departments across the university to tailor their baccalaureate degree to meet requirements for employment or admission to various graduate programs, including but not limited to Physical Therapy, Occupational Therapy, Post-Baccalaureate nursing programs, and Physician Assistant.

The **Health Sciences** concentration in Allied Health Sciences prepares students interested in health specialties which involve laboratory procedures for diagnostic purposes or who are looking to pursue allied health fields requiring a strong health science and pathology background. This concentration is also designed for students seeking admission to post baccalaureate (graduate) programs such as, but not limited to, Physician Assistant, Pathology Assistant, Medical or Dental School, Epidemiology, Optometry, Pharmacy or the Department of Allied Health Sciences' Post-Baccalaureate Diagnostic Genetic Sciences or Medical Laboratory Sciences Certificate Programs.

The **Health Promotion Sciences** concentration in Allied Health Sciences prepares students interested in working in a setting such as health and social service agencies, worksite health promotion programs, government health agencies, hospital wellness programs, business, industry, and educational settings that emphasize health promotion. This concentration is also designed for students seeking admission into graduate programs such as the Department of Allied Health Sciences Master's Program in Health Promotion as well as for those looking to enroll in graduate programs such as Public Health, Gerontology, Health Education, Health Administration, Health Policy and Law, Health Psychology, or the Department of Allied Health Sciences Post-Baccalaureate Certificate in Health Promotion and Health Education.

The **Occupational Safety and Health (OSH)** concentration in Allied Health Sciences prepares students with an interest in acquiring knowledge about occupational safety and health issues or applying marketable skills in a broad range of work environments such as manufacturing, construction, health care, research and development, and academia among many others, should consider this concentration. OSH specialists identify, assist in the prevention and control of health and safety hazards related to work and the work environment, OSH specialists promote health and safety within organizations by developing safer, healthier, and more efficient ways of working. For those students wishing to pursue a career in OSH, the concentration provides a foundation for professional certification in individual disciplines such as occupational safety, industrial hygiene and ergonomics.

Admission – Allied Health Sciences Concentrations

Admission to the Health Sciences, Health Promotion Sciences or Occupational Safety and Health concentrations within the Allied Health Sciences major requires a minimum of 45 earned credits, a cumulative GPA of 2.2 or higher, academic good standing, and successful completion of one college level (1000-level or higher) course in each of the following: biology, chemistry, and mathematics as listed below.

To satisfy the general education requirements for computer technology and information literacy competencies, Allied Health Sciences majors must meet the University's entrance expectations. They will not have to meet any advance requirements for computer technology and information literacy competency.

To satisfy the general education requirement for writing in the major, Allied Health Sciences students must pass the writing in the major course as indicated below.

The course requirements listed below are those of the Department of Allied Health Sciences and may also satisfy the University's General Education

requirements.

Required courses in basic sciences and mathematics:

Allied Health Sciences (no concentration) and Allied Health Sciences with Health Promotion Sciences concentration: AH 1100; CHEM 1122 or 1124Q or 1127Q; PHYS 1010Q or CHEM 1125Q or 1128Q; BIOL 1107; NUSC 1165; PSYC 1100; PSYC 1101 or 1103; PSYC 2300, 2400; MATH 1040Q or 1060Q or 1125Q or higher; STAT 1000Q or 1100Q; and two (2) additional science courses approved by the Department of Allied Health Sciences. Science courses used to meet program requirements cannot be used to meet this requirement.

Writing in the major: AH 4240W

Allied Health Sciences with Health Sciences concentration: AH 1100; CHEM 1124Q or 1127Q; CHEM 1125Q or 1128Q; CHEM 2241 and 2242 or 2443, 2444, and 2445; BIOL 1107; PHYS 1201Q and 1202Q or PHYS 1401Q and PHYS 1402Q or PHYS 1501Q and 1502Q; PSYC 1100; MATH 1060Q or 1125Q or higher; STAT 1000Q or 1100Q; and two (2) additional science courses approved by the Department of Allied Health Sciences. Science courses used to meet program requirements cannot be used to meet this requirement.

Writing in the major: AH 4240W

Allied Health Sciences with Occupational Safety and Health concentration: AH 1100; BIOL 1107; CHEM 1124Q or 1127Q; CHEM 1125Q or 1128Q; MATH 1060Q or 1125Q or higher; NRE 1000; PHYS 1010Q or PHYS 1201Q or higher; PSYC 1100; PSYC 1101 or 1103; STAT 1000Q or 1100Q; and two (2) additional science courses approved by the Department of Allied Health Sciences (required science courses cannot also be used to meet the science electives; CHEM 1126Q and/or CHEM 2241 suggested).

Writing in the major: AH 4221W or 4240W

36 Credits Major Requirement: Students majoring in Allied Health Sciences (AHS) (with or without a concentration) must complete 36 credits of course work (Groups A and B below) meeting the following requirements:

1. Numbered 2000-level or above
2. **Be Include a minimum of 30 credits** completed at the University of Connecticut
3. Approved by the student's advisor and department head [Department of Allied Health Sciences](#)
4. Include coursework from two or more departments
5. Courses cannot be taken on pass/fail
6. **Courses must be passed** with a grade of "C" or better
7. **Courses may be repeated** once for a total of two times
8. **Cannot include more than 6 credits (combined) of internship, independent study, or foreign study taken at the University of Connecticut**
9. **Cannot include more than 8 credits of courses used to satisfy requirements for a minor**

The 36-credit major and graduation requirements to the Allied Health Science:

Group A: A minimum of 18 credits in **Major** course work *within* the CANR (course requirements vary by concentration as indicated below). Students may include a maximum of 6 credits of combined Foreign Study (AH 4093), Independent Study (AH 3099; DIET 3099; DGS 3999; MLSC 4099) and Internship credits (AH 3091) toward the A-3 requirement with advisor and department head approval.

Group B: A minimum of 18 credits in **Related Cognate** course work selected based on the student's interest, ability, and that speaks to the student's career goals and interests approved by the advisor and department head. Courses used cannot also be used to meet group A requirements. Courses used to meet the Health Sciences concentration related cognate group B must be from the following subject areas: AH major/Health Sciences concentration Group A-3 courses (not used to meet that requirement) BIOL, CHEM, MCB, PHYS, PNB. Other courses may be used with advisor and department head approval.

Group-A Major Course requirements by concentration:

Allied Health Sciences (no concentration)

Group A: A-1 AH 2001, 4239 and 4240W ~~and 4241~~; **A-2** and; two of the following: AH 2000, 4242, 4244; **A-3** and; minimum of 8 credits (or three additional courses) from the CANR from the following list of options. Other courses may be used to meet this requirement pending advisor and department head approval. Courses cannot **also** be used to meet Group A-2 requirement:

AH 2000, 3021, 3101, 3121, 3133, 3175, 3203, 3234, 3571, 3574, 4242, 4243, 4244; DIET 3230; DGS 3222, 3226, 4224, 4234, 4246; MLSC 3130; NUSC 2200, 4236, 4250; PVS 3100, 4300

Allied Health Sciences with Health Promotion Sciences concentration

Group A: A-1 AH 2001, 4239 and 4240W ~~and 4241~~; **A-2** AH 3231 and 4242; **A-3** and; minimum of 8 credits (or three additional courses) from the CANR from the following list of options. Other courses may be used to meet this requirement pending advisor and department head approval. Courses cannot **also** be used to meet Group A-2 requirements: AH 2000, 3101, 3133, 3175, 3203, 3234, 3574, 4243, 4244; DIET 3230; NUSC 2200, 4236, 4250

Allied Health Sciences with Health Sciences concentration

Group A-1: AH 2001, 4239 and 4240W ~~and 4241~~; **A-2** and; two of the following: AH 2000, 4242, 4244; **A-3** and; minimum of 8 credits (or three additional courses) from the CANR from the following list of options. Other courses may be used to meet this requirement pending advisor and department head approval. Courses cannot **also** be used to meet Group A-2 requirement: AH 3021, 3101, 3121, 3133, 3175; DGS 3222, 3226, 4224, 4234, 4246; MLSC 3130; NUSC 4236, 4250; PVS 3100, 4300

Allied Health Sciences with Occupational Safety and Health concentration:

Group A: A-1: AH 2001 and either AH 4221W; 4239 and 4240W ~~and 4241~~; **A-2** all of the following: AH 3570, 3571 and 3573; **A-3:** Two of the following courses: AH 3175, 3275, 3574. Other courses may be used to meet this requirement pending advisor and department head approval.

Allied Health Sciences - Professional Majors

The Cytogenetics, Dietetics, Diagnostic Genetic Sciences and Medical Laboratory Sciences majors are professional majors in the Department of Allied Health Sciences. For program descriptions, please refer to the program listed alphabetically under the College of Agriculture and Natural Resources. General admission and program information is described in this section.

Cytotechnology, Dietetics, Diagnostic Genetic Sciences, and Medical Laboratory Sciences are competitive junior/senior programs with additional admission requirements, certifications, and health documentation as listed below. Please contact the department for questions and further information on requirements that may vary for each program. Currently, students are not being accepted to the Cytotechnology program.

The admission requirements and mandatory documentation and certifications are *only* required of students admitted to the Department of Allied Health Sciences' Professional majors. All other students do not need to complete this documentation unless required to do so as part of an optional internship course.

Admission

Admission for the Professional majors is competitive. The Professional majors in the Department of Allied Health Sciences are junior/senior programs. Students apply to their major(s) of choice in the spring of their sophomore year. To apply, students must have earned a minimum of 60 credits, completed all University General Education requirements, **except the one W skill course within the major**, and satisfied the prerequisite science courses of the major of application. Students are advised to complete all application procedures as early as possible in their fourth semester, but no later than February 1st annually. Admission is for the fall semester.

Guaranteed Admission Policy: Although freshmen are not admitted directly into the professional majors, the Department of Allied Health Sciences has a Guaranteed Admission Offer. This offer provides freshmen with direct admission in the junior year to the professional major of their choice if the student fulfills the criteria described under each major below. The Guaranteed Admission Offer is made to provide students with a clear and supportive environment in which to complete admission prerequisites and achieve their academic goals in the Department of Allied Health Sciences.

In order to qualify for Guaranteed Admission to the Professional majors in Diagnostic Genetic Sciences, Dietetics, or Medical Laboratory Sciences a student must: (1) have entered the University as a freshman; (2) apply to the major within two years of their freshman admission; (3) complete 3 successive semesters of full time study of required course work at the University of Connecticut; (4) must earn an Overall Grade Point Average of a minimum of a 3.2 for Diagnostic Genetic Sciences or must earn an Overall Grade Point Average of a minimum of a 3.0 for Dietetics, or Medical Laboratory Sciences, and (5) meet all Admission Requirements and file a Department of Allied Health Sciences Application by

the deadline. Students meeting all of these criteria are guaranteed admission to the major.

University of Connecticut students who do not meet the Guaranteed Admission Offer will be reviewed competitively on a space available basis. Transfer Applicants to the professional majors will be reviewed on a space available basis once matriculated University of Connecticut students have been reviewed and offers of admission have been confirmed.

University transfer admission requires a minimum 2.7 GPA even though professional program admission requires a minimum 2.2 GPA. Transfer students must first be admissible to the University before an offer of admission can be extended by the Department of Allied Health Science. Transfer students may require an additional year to complete requirements depending on how their prior coursework transfers and course availability at time of registration. Students are encouraged to take prerequisites at the University of Connecticut to expedite admission to a professional program.

Supplemental Academic Standards. The Department of Allied Health Sciences requires a cumulative grade point average of not less than 2.2 in order to gain admission to the professional majors. Thereafter, students must maintain the following standards of scholastic achievement to continue in the professional major. Students who fail to maintain the minimum grade point averages or minimum course standard in any of these areas are subject to dismissal from the professional program and in some cases the Department of Allied Health Sciences.

1. Students must maintain a minimum semester grade point average of 2.2
2. Students must maintain a minimum cumulative grade point average of 2.2
3. Students must maintain a minimum major grade point average of 2.2
 - a. The Diagnostic Genetic Sciences Major GPA includes all courses offered with the following departmental designations: AH, DGS, and the following MCB courses: 2000, 2210, 2410, and 2610
 - b. The Dietetics Major GPA includes all courses offered with the following departmental designations: AH, DIET, and the following NUSC courses: 2200, 3233, and 3234
 - c. The Medical Laboratory Sciences Major GPA includes all courses offered with the following departmental designations: AH and MLSC. Students receiving a grade less than a "C" in two or more courses with the departmental designations of AH or MLSC in any given semester are subject to dismissal from the Program and in some cases the Department of Allied Health Sciences.
4. Students must obtain a "C" or better in all courses required for graduation that are in the Department of Allied Health Sciences. Courses vary with program.
5. No student may take a course in the Department of Allied Health Sciences for which another course in the department is a prerequisite unless that student has earned a grade of "C" or better in that prerequisite course.
6. No course in the Department of Allied Health Sciences may be repeated more than once (for a total of two times).

Descriptions and specific course requirements of each of the Professional Majors of Cytotechnology, Diagnostic Genetic Sciences, Dietetics, and Medical Laboratory Sciences are included in individual programs sections listed in alphabetical order within this section of the *Catalog*.

Additional Requirements (May not apply to all majors)

Health. In addition to pre-entrance University requirements, students admitted to the Professional Majors in the Department of Allied Health Sciences are required to have a tetanus immunization within the past ten years; physical examination; annual tuberculin test (with chest x-ray for positive reactors); rubella and rubeola titers (with vaccine if titer is negative); and varicella titer. Physical examinations, tuberculin tests and chest x-rays as indicated are planned through the University Student Health Services. In addition to the basic health screening requirements students in all professional majors are required to have Hepatitis B Immunization. Students are responsible for payment of health examinations and laboratory tests not covered by their personal insurance. Students who fail to provide written documentation that they have met the above stated health requirements will not be allowed in the clinical setting.

CPR. Dietetics students are required to have Adult or Healthcare Provider cardiopulmonary resuscitation certification upon admission into the professional major. Students in the Diagnostic Genetic Sciences or Medical Laboratory Sciences majors are not required to have CPR certification. CPR certification must be kept current until graduation.

Clinical Education Certification. The Department of Allied Health Sciences will provide annual mandatory educational sessions so that students entering a professional major and who are entering the clinical setting are in compliance with both the OSHA Bloodborne Pathogen Standards and are knowledgeable of the requirements for compliance with the Health Insurance Portability and Accountability Act (HIPAA). Students who fail to provide written documentation that they met both the above stated OSHA and HIPAA requirements will not be allowed in the clinical setting.

Clinical Experiences. Each of the professional major curricula of the department requires education experiences in clinical settings. Assignment to clinical placements is contingent upon successful completion of the appropriate prerequisite course work and the judgment of the faculty of the preparedness of the student for safe practice. Additionally, students entering clinical placements must complete clinical documentation to include but not limited to a Medicare Exclusion waiver and in some clinical settings a criminal background check. Students will be notified if they are attending a clinical facility that requires this documentation. Students are responsible for payment of criminal background checks if part of their clinical affiliation.

Fees and Expenses. Students can expect fees to approximate those of other University students. The professional majors and internship students have added expenses for texts, uniforms and/or clinical travel. Students on clinical placement or doing an internship as part of their major are responsible for all expenses associated with the clinical/internship. Students are responsible for their own transportation to the clinical agencies/internship sites. They should allow for transportation expenses which could include parking fees, cost of gasoline and cost of air travel/bus/train where necessary. Students are required to pay full fees and tuition during off-campus clinical affiliations and internships. During periods spent full-time in the affiliated areas off-campus, if applicable it is the responsibility of the students to find living quarters and to provide their own maintenance.

Insurance. It is mandatory that students in the Department of Allied Health Sciences' Professional majors carry comprehensive health insurance, either privately or through the University. Additionally, all students in the professional majors or relevant internships are required to carry specific professional liability (malpractice) insurance under the blanket University policy. Students will automatically be billed for this on the University fee bill.

Allied Health Sciences Post-Baccalaureate Certificate Programs

These programs are open only to those students who have completed a Bachelors Degree in an appropriate discipline.

The Dietetic Internship is a certificate program administered by the Department of Allied Health Sciences' Dietetics major in collaboration with Hartford Hospital. The internship provides the student with the performance requirements for entry-level dietitians through a minimum of 1200 hours of supervised practice. The Dietetic Internship is accredited by the Academy of Nutrition and Dietetics Commission on Accreditation for Dietetics Education, 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606-6695, (800) 877-1600. Students enrolled in this program are required to take six credits of didactic coursework at the graduate level to insure competency. Upon completion of the Dietetic Internship the student is eligible to take the National Registration Examination for Dietetics administered by the Commission on Dietetic Registration of the Academy of Nutrition and Dietetics. Students must pass this examination in order to be a Registered Dietitian.

The Diagnostic Genetic Sciences Certificate Program is open to individuals with a baccalaureate degree in Medical Laboratory Sciences, or the biological or natural sciences, and who meet the specific course prerequisites and academic standards. Students apply to one of two concentrations within this program: Cytogenetics or Molecular Diagnostics. Upon completion, the student receives a certificate from the Department of Allied Health Sciences College of Agriculture and Natural Resources.

The Cytogenetics Concentration is open to individuals with a baccalaureate degree in the medical laboratory sciences or the biological or natural sciences and who meet the course prerequisites for admission to the clinical practicum components. Upon successful completion, students are eligible to sit for the Certification examinations in Cytogenetics offered by the American Society for Clinical Pathology (ASCP).

The Molecular Diagnostics Concentration is open to individuals with baccalaureate degrees in Cytogenetics, Medical Laboratory Sciences, or the biological or natural sciences, and who meet the specific course prerequisites and academic standards.

The Medical Laboratory Sciences Certificate Program is administered by the Department of Allied Health Sciences' Medical Laboratory Sciences Program in collaboration with Hartford Hospital. The program is open to individuals with a baccalaureate degree in the biological or natural sciences and who met the specific course prerequisites and academic standards. Upon completion, students are eligible to sit to the National Board of Certification Examination administered by the American Society of Clinical Pathology (ASCP).

Prospective students are advised to contact the Department of Allied Health Sciences (860-486-2834) for program information and admission requirements.

Animal Science

This major provides six options leading to the B.S. degree: Pre-professional (veterinary medicine or graduate training), Biotechnology, Business/Service, Equine Sciences, Food Science, and Production Management. For detailed information, please refer to: www.animalscience.uconn.edu

Animal Science majors must pass all courses from Group A, at least one course from Group B, at least two courses from Group C, and one additional course from either Group B or C. **Group A:** (All of the following): ANSC 1001, 2111, 3121, 3122, 3194, PVS 2100, BIOL 1107, and CHEM 1122 or 1127Q or both 1124Q and 1125Q; **Group B:** ANSC 2251, 2271, 3261, 3272, 3273; **Group C:** ANSC 3313, 3323, 3343, 4341. Either MCB 2000 or 2610 or 3010 can fulfill one of the Group C requirements.

To satisfy the general education requirement for the computer technology competency, students must meet the University's entrance expectations.

To satisfy the general education requirement for information literacy, students must pass ENGL 1010 or 1011 and one of the following courses: ANSC 2111, 3194, 3261, 3314W, 3344W, or 4662W.

To satisfy the general education requirement for writing in the major, students must pass either ANSC 3314W, 3344W, or 4662W.

The Department of Animal Science offers minors in Animal Science, Dairy Management, Food Science, and Therapeutic Horsemanship Education. These are described in the "Minors" section of this *Catalog*.

Cytotechnology

Students are not being accepted to the Cytotechnology program at this time.

Diagnostic Genetic Sciences

The Diagnostic Genetic Sciences major leads to a Bachelor of Science degree and offers two concentrations: Cytogenetics and Molecular Diagnostics. Medical cytogenetic technologists study blood, bone marrow, tissue and amniotic fluid for chromosomal abnormalities that are associated with genetic malformations and diseases like cancer. Molecular Diagnostic technologists evaluate and investigate DNA and RNA with regards to disease, identity, cancer and forensics. The on-campus course requirements for the two emphasis areas are the same, but the clinical courses differ.

~~The Cytogenetics emphasis is~~ Both concentrations are accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) (5600 N. River Road, Suite 70, Rosemont, IL 60018-5119, phone: 773-714-8880). Graduates of ~~the Cytogenetics concentration~~ are eligible to take ~~the~~ certification examinations ~~in Cytogenetics~~ administered by the American Society of Clinical Pathologists (ASCP) immediately upon graduation.

Requirements

The course requirements listed below may also be used to satisfy the University's General Education requirements.

Mathematics and Science Courses - CHEM 1124Q and 1125Q or CHEM 1127Q and 1128Q; CHEM 2241 and 2242 or CHEM 2443 and 2444; BIOL 1107; Biology Option: BIOL 1103 or a course in Anatomy and Physiology or BIOL 1108 or MCB 2610 or a Biology course pre-approved by the Diagnostic Genetic Sciences Program Director; MATH 1040Q or 1060Q or 1125Q or above; MCB 2000, 2210, 2410, 2610; STAT 1000Q or 1100Q.

Professional Courses - AH 2001, 3121, 4241, 4244; DGS 3222, 3223, 3225, 4224, 4234W, 4235, 4246, 4248; Cytogenetics ~~Emphasis-Concentration~~ Clinical Courses: 4701, 4702, 4703, 4712, 4713, 4750; Molecular ~~Emphasis-Concentration~~ Practicum Courses: 4501, 4502, 4503, 4550; and one of the following: 4510, 4512, 4513, 4514, 4515.

Writing in the Major - DGS 4234W. **Computer Technology** - University entry-

level competencies have been reviewed and satisfy all program requirements.

Information Literacy - Competencies will be met through successful completion of program major courses.

Dietetics

The Dietetics major leads to a Bachelor of Science degree. The program combines theory in the classroom with supervised practice in clinical dietetics, community nutrition, and food service sites off campus to prepare students to sit for the National Registration Examination for Dietetics and earn the credential of RD. Dietitians assess nutritional needs, plan individualized dietary plans, provide counseling and evaluate nutritional care for individuals and groups.

The Dietetics major is accredited by the Commission on Accreditation for Dietetic Education, 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606-6695, (800) 877-1600. This Commission recently increased the supervised practice requirements from 900 to 1200 hours. As a consequence, students in the Dietetics Coordinated Program will graduate in May of their senior year, but must also complete a 6 credit externship immediately thereafter in order to receive a verification statement certifying that all coursework and supervised practice requirements have been completed. This statement qualifies the student to sit for the national registration examination, which they must pass in order to become a Registered Dietitian. The externship entails 6 weeks (40 hours/week) of intensive supervised practice experiences. Students will register for the externship as non-degree students through the Center for Continuing Studies and will incur an additional expense.

Requirements

The course requirements listed below may also be used to satisfy the University's General Education requirements.

Mathematics and Science Courses - CHEM 1124Q and 1125Q or CHEM 1127Q and 1128Q; BIOL 1107; STAT 1000Q or 1100Q; MCB 2000, 2610; PNB 2264 and 2265; CHEM 2241; NUSC 1165, 1167, 2200, 3233, 3234

Social Sciences - One 1000-level or higher course in either psychology or sociology

Professional Courses - AH 4241, 4242, 4244, DIET 3150, 3155, 3215, 3230, 3231W, 3235, 3250, 3255, 3272, 4272, 4350, 4360, 4365, 4370, 4415, 4435, 4455, 4470, 4475

Writing in the Major - DIET 3231W. **Computer Technology** - University entry-level competencies have been reviewed and satisfy all program requirements.

Information Literacy - Competencies will be met through successful completion of program major courses.

Environmental Science

The major in Environmental Science is based in the physical and biological sciences, but also includes course work in selected areas of the social sciences. The major leads to a Bachelor of Science degree, and may be adopted by students in either the College of Agriculture and Natural Resources or the College of Liberal Arts and Sciences. This curriculum offers a comprehensive approach to the study of environmental problems, including not only a rigorous scientific background, but also detailed analyses of the social and economic implications of environmental issues. The complexity and interdisciplinary nature of environmental science is reflected in the core requirements of the major. These courses, assembled from several different academic departments representing two colleges, provide both breadth and depth, preparing students for careers that deal with environmental issues, and for graduate study in environmental science and related fields.

A. Required courses in Basic Science: ARE 1150; BIOL 1107, BIOL 1108 or 1110; CHEM 1124Q, 1125Q, 1126Q or 1127Q, 1128Q; MATH 1125Q, 1126Q, 1132Q or 1131Q, 1132Q; PHYS 1201Q, 1202Q, or 1401Q, 1402Q; STAT 1000Q or 1100Q or 3025Q.

B. Required Courses in Introductory Environmental Science: Select any two from GEOG 2300, GSCI 1050, MARN 1002, NRE 1000.

C. Required courses numbered 2000-level or above in Environmental Science: AH 3175, EEB 2244/W, GSCI 3020, MARN 3000, NRE 3145

D. Capstone course: NRE 4000W

E. General Education competency requirements: Completion of NRE 4000W will satisfy the writing in the major and information literacy requirements. Completion of STAT 1000Q or 1100Q or 3025Q and NRE 4000W will satisfy the computer literacy requirement.

F. Concentration requirements: All students majoring in Environmental Science must also fulfill the requirements of a concentration in a discipline associated with the program before graduation. Approved concentrations are listed below.

Environmental Health - Students must pass all of the following: AH 3021 or AH 3133, AH 3275, and ANSC 4341

Students must pass two of the following: MCB 3201, 2410, 2610*, 3011, 4211, 3633* (*At least one of these laboratory course must be taken.)

Students must pass one of the following: AH 3570, 3571, 3573, 3574; ANSC 4642; DGS 3222; NUSC 4236; PVS 2100, 4300

Natural Resources - Students must take NRE 2000, 2010, and 4094 plus two additional NRE courses numbered 3000 and above.

Resource Economics - Students must take 15 credits from the following: ARE 3260, 3434, 3436, 3437, 3450, 4438, 4462, 4444, 4464, 4999 and up to one additional ARE course numbered 3000-level or above with prior Advisor approval.

Soil Science - Students must pass the following: SOIL 2120, 2125, and 3410 Must select 2 courses from: CE 5090; NRE 4165; PLSC 3995, 5420; SOIL 3253.

Environmental Science also offers the following concentrations through the College of Liberal Arts and Sciences: Environmental Biology, Environmental Chemistry, Environmental Geography, Environmental Geoscience, Marine Science. For complete requirements, refer to the Environmental Science description in the "College of Liberal Arts and Sciences" section of this *Catalog*:

Horticulture

The Horticulture major offers courses in the commercial production of vegetables and fruits, propagation and production of woody and herbaceous ornamental plants, and the identification, uses, and maintenance of plants in landscapes and gardens. The Plant Biotechnology option includes micropropagation and the application of molecular methods to genetic improvement of plants. (For detailed information, please refer to: <http://www.cag.uconn.edu/plsc/plsc/>)

Horticulture majors must pass the following courses: BIOL 1110; CHEM 1122 or 1124Q or 1127Q; PLSC 1000, 4210, 4215; SOIL 2120, 2125; and HORT 3640; **Two of:** HORT 2430, 3410, 3420, 3560; EEB 4272; NRE 2415; **One of:** ARE 1150, 3210, 3215 or ECON 1200, 1201; **Two of:** PLSC 3810, 3820, 3840; PLSC 3830 or EEB 4253; **Two of:** HORT 2750, 3540, 3620, 3650, 3660, 3670, 3675, or 3760

Horticulture majors must pass HORT 2560W or LAND 3230W or TURF 3200W to fulfill their requirement for writing in the major.

Students successfully completing these courses will have met their general education exit requirements for information literacy.

Computer technology competency is satisfied by University entrance expectations.

A minor in Ornamental Horticulture is described in the "Minors" section.

Individualized Major

The Individualized Major program allows students to create a major that is not otherwise offered at the University of Connecticut. Students pursuing an Individualized Major must meet all university-level and college-level requirements for graduation and complete at least 36 credits numbered 2000 or above. Requirements for declaring and completing an Individualized Major are listed below:

- Students must be in good academic standing with a minimum GPA of 2.5 to declare an Individualized Major.
- Students must submit a proposed statement of purpose and identify three faculty members who are willing to serve as an advisory committee.
- An Individualized Major has a minimum of 36 credits numbered 2000 or above courses which must: be from two or more departments; include at least 18 credits from departments in the College of Agriculture and Natural Resources; be approved by the student's advisory committee; be taken at the University of Connecticut; have a combined Grade Point Average of at least 2.5; include no more than 6 credits of Independent Study and Internship; not to be taken on Pass/Fail; meet all requirements of the "36 Credit Group" of the College of Agriculture and Natural Resources

To satisfy the general education requirement for the computer technology competency, Individualized Majors must meet the University's entrance expectations. They will not have to meet any advanced requirement for computer technology.

The writing in the major and information literacy requirements will be satisfied by meeting these requirements for any of the majors within the College of Agriculture and Natural Resources.

Landscape Architecture

This major provides instruction in site planning and design, landscape history, landscape architectural graphics and presentation. It includes the use of plants and other features to enrich exterior spaces. Through seminars, studio projects and internships, students learn to apply theory to actual case studies. The program is accredited by the American Society of Landscape Architects. (For detailed information, please refer to: <http://www.cag.uconn.edu/plsc/plsc/>)

Landscape Architecture majors must pass the following courses:

1. BIOL 1108 or 1110
2. CHEM 1122 or 1124Q or 1127Q
3. **PLSC 1000**; HORT 3410; SOIL 2120; LAND 2110, 2120, 2210, 2220, 2410, 3130, 3230W, 3310, 3320, 3420, 3430, 4294, 4330, 4340, 4440, and 4450

One of the following: HORT 2430, 2750, 3420, 3760; PLSC 4210; SOIL 3520; EEB 4272; NRE 2415

Supplemental Scholastic Standards. Accreditation and space restrictions necessitate that the number of students in the Program of Landscape Architecture be limited. All students choosing the landscape architecture major will be evaluated after they have taken introductory landscape architecture courses LAND 2110 and 2210. Minimum requirements for continuance in the Program of Landscape Architecture are a cumulative grade point average of 2.5 or better and a grade of 3.0 (B) or better in both introductory courses. For students meeting these requirements, faculty evaluation of portfolio of work produced in introductory courses, student essay and GPA will determine final acceptance into the Program.

Thereafter students must maintain a cumulative grade point average of 2.5 or better, and must earn grades of 2.7 (B-) or better for all major (LAND) courses. Students who receive more than one grade below 2.7 (B-) in major (LAND) courses will be dismissed from the major. Courses may be retaken if space allows, with permission of the instructor, but no course in the Program of Landscape Architecture may be repeated more than once (for a total of two times).

Students who do not meet the requirements may want to consider other majors including Horticulture or Turfgrass and Soil Science. For detailed information, refer to <http://www.cag.uconn.edu/plsc/plsc/>.

Students successfully completing these courses will have met their general education exit requirements for computer technology and information literacy.

Landscape Architecture majors must take LAND 3230W to fulfill their requirement for writing in the major.

Minors in Landscape Design and Ornamental Horticulture are described in the "Minors" section.

Medical Laboratory Sciences

Medical Laboratory Scientists apply biological and chemical principles to perform, interpret, and correlate laboratory analyses on body fluids and tissues. Medical Laboratory Scientists are responsible for selecting appropriate methods and implementing quality assurance for tests designed to promote health and prevent, diagnose, and treat diseases.

The Medical Laboratory Sciences major leads to a Bachelor of Science degree and is offered in conjunction with Hartford Hospital which holds accreditation through the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 North River Road, Suite 720, Rosemount, IL 60018-5119, phone (773) 714-8880. Graduates are eligible for the National Board of Certification examination administered by the American Society for Clinical Pathology (ASCP) upon graduation.

Requirements

The course requirements listed below may also be used to satisfy the University's General Education requirements.

Mathematics and Science Courses - CHEM 1124Q and 1125Q or CHEM 1127Q and 1128Q; CHEM 2241 or CHEM 2443 and 2444; BIOL 1107; Science Option*; MATH 1040Q or 1060Q or 1125Q or above; STAT 1000Q or 1100Q; MCB 2000; 2400 or 2410; PVS 4300 or PNB 2264 and 2265 or 2274 and 2275.

*Subjects Areas that may be used to satisfy the science option (Others may be

substituted with substitution/exemption approval) ANSC; BIOL (except 1102); CHEM; MCB; PVS (except 4300); PHYS; PNB (except 2264 and 2265 or 2274 and 2275 if used to fulfill the PVS 4300 requirement)

Professional Courses - AH 2001, 3121, 4241, 4244; MLSC 3130, 3132, 3301, 3333, 3361, 3365, 4094W, 4301, 4302, 4311, 4312, 4321, 4322, 4341, 4342, 4351, 4352, 4366, 4371, 4372

Writing in the Major - MLSC 4094W. **Computer Technology** - University entry-level competencies have been reviewed and satisfy all program requirements.

Information Literacy - Competencies will be met through successful completion of program major courses.

Natural Resources

This major, offered by the Department of Natural Resources and the Environment, prepares students for careers related to the management of natural resources. Students develop skills in applying modern technology, concepts and principles dealing with sustainable development, environmental protection and resource conservation. In addition to the core requirements, all students must complete one or more of the following concentrations: Climate and Water Resources, Environmental Conservation, Fisheries and Wildlife Conservation, Forest Resources, or Geomatics. (For detailed information, please refer to: <http://www.nre.uconn.edu>)

Competency Requirements: Students successfully completing the courses listed below will have met their General Education information literacy exit requirements for this major. Students are expected to have gained additional computer technology competency in the fields of geographic information systems (GIS) and Global Positioning System (GPS) data collection and processing. Students will gain these competencies by passing NRE 2000. Students passing NRE 4000W will satisfy the writing competency requirement within the major.

All Natural Resources majors must pass the following core requirements:

NRE 1000, 2000, 2010, 4000W, 4094; BIOL 1107 or 1108 or 1110; CHEM 1122 or 1124Q or 1127Q; MATH 1060 or 1120Q or 1131; SOIL 2120 and 2125 or GSCI 1050; PHYS 1201Q or 1401Q; STAT 1100

In addition to the core requirements, all students must complete one or more of the following concentrations:

Climate and Water Resources

All of the following: NRE 2215, 3125, 3146, 4135

Three courses from the following: EEB 3247; NRE 3105, 3115, 3145, 3155, 3205, 4175, 4535

Two additional courses from the following: EEB 3247; GSCI 3020; MARN 3000; NRE 3105, 3115, 3145, 3155, 3205, 3245, 3246, 3535, 4165, 4170, 4175, 4535, 4575, 4665

Environmental Conservation

All of the following courses: ARE 1150 or ECON 1201; COMM 1100; EEB 2244 or 2244W; NRE 1235, 3245, 3246 and 3690.

Three courses from the following: ARE 3434 or 3434 and 3440W, 4438, 4462; COMM 4410W; NRE 4600; POLS 3842; SOCI 3407

Pending course number change approval:

Fisheries and Wildlife Conservation

EEB 2214, 2244 or 2244W; NRE 2345, 3245, 3246, and 3335 or 4335

One course from the following: EEB 3254, 3265, 4200; or 4260 and 4261

Two courses in addition to those selected above from among the following: EEB 2208, 3247, 3254, 3265, 4200, or 4260 and 4261; NRE/EEB 3305/3307; NRE 2415, 2325, 3105, 3155, 3205, 3315, 3335, 3345W, 3475; 4335, X455 4455?, 4475, 4665

Pending course number change approval:

Sustainable Forest Resources

All of the following: NRE 3115, 2345, 2415, 3125, 3335, 3475; 3500, 3690, 4475, X455 4455?, PLSC 3840

One course from the following: NRE 3252, 4544, 4545 or 4575 and

One course from the following: NRE 3246, ARE 3434 or ARE 3434 and 3440W

Pending course number change approval:

Geomatics

NRE 4535, 4544, 4545, and 4575; Two courses from the following: NRE 3535; CE 2410; GEOG 2300, 4500, 4510; MATH 1120Q or higher; Three courses from the following: CSE 1010 or 1100; NRE 2415, 3105, 3125, 3155, 3475, 3146, X455 4455?, 4475, 4665, 4689, 5461, 5555

A minor in Wildlife Conservation is described in the "Minors" section.

Nutritional Sciences

Students majoring in Nutritional Sciences all receive a Bachelor of Science degree in Nutritional Sciences. The department offers two areas of emphasis: Dietetics and Nutritional Sciences. Each area follows a different curriculum including non-departmental courses, in order to best prepare students for their future goals. Students preparing to become registered dietitians follow the Didactic Program in Dietetics which is accredited by the Commission on Accreditation for Dietetic Education of the American Dietetic Association

(ADA), 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606-6695, (800) 877-1600.

The Nutritional Sciences curriculum is generally more flexible than the Dietetic curriculum. Students in this option integrate the Nutritional Sciences core requirements with additional courses in the laboratory or behavioral sciences. (For detailed information, please refer to: <http://www.cag.uconn.edu/nutsci/nutsci/>).

Admission requirements. Students not admitted to the University as Nutritional Sciences majors may petition into this major during the first two weeks of each semester. The following petition requirements must be met for consideration of a major change into the Nutritional Sciences major:

1. Earned at least a C in CHEM 1124Q or CHEM 1127Q and a C- in CHEM 2241 or CHEM 2443
2. Earned at least a B in NUSC 1165 and 2200

Nutritional Sciences majors must successfully pass the following courses: NUSC 1165, 2200, 4236, and 4237W; BIOL 1107; CHEM 1124Q and 1125Q or CHEM 1127Q and 1128Q; CHEM 2241, or 2443 and 2444; PNB 2264 and 2265, or BIOL 1108 and PNB 2250, or BIOL 1108 and PVS 2100; MCB 2000 or 3010.

In addition to the courses listed above, a minimum of 4 credits, numbered 2000-level or above, must be earned from courses in the Department of Nutritional Sciences. Credits earned in field experiences and independent studies cannot be used to meet this 4-credit requirement. Specific course recommendations are listed in the *Undergraduate Bachelor Degree Program* brochure in the department.

Students must take either NUSC 4237W or 4296W to fulfill their writing in the major requirement. The advanced information literacy requirement is fulfilled with NUSC 4237W. There are no advanced requirements for computer technology.

A minor in Nutrition for Exercise and Sport is described in the "Minors" section.

Didactic Program in Dietetics. Nutritional Science students preparing to apply for a dietetics internship in preparation to become registered dietitians may enroll in the Didactic Program in Dietetics which is accredited by the Commission on Accreditation for Dietetic Education for the American Dietetic Association (ADA) 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606-6695. (800) 877-1600. Majors admitted into this concentration must complete the core requirements for all Nutritional Science majors plus: NUSC 1167, 2245, 3150, 3230, 3233, 3234, 3250, 3271, 3272, 4272; MCB 2610; AH 4242, 4244; STAT 1000Q or 1100Q; SOCI 1001; ARE 1150.

Admission to the Didactic Program in Dietetics concentration within the Nutritional Sciences major requires a minimum of 60 earned credits, a cumulative GPA of 2.7 or higher, successful completion of the following courses with a C grade or better: CHEM 1124Q and 1125Q or CHEM 1127Q and 1128Q; CHEM 2241 or 2443 and 2444; and BIOL 1107, and a B grade or better in NUSC 1165 and NUSC 2200.

Pathobiology

Students majoring in Pathobiology focus on animal health and diseases and their relationship to people and the environment. Students can prepare to enter veterinary medical schools or medical schools. Pathobiology majors also pursue careers in biotechnology, biomedical sciences, para-veterinary medicine, and many diverse laboratory and research positions in health fields and agriculture

and natural resources. (For detailed information, please refer to: <http://www.patho.uconn.edu/>)

Pathobiology majors must pass the following courses: PVS 1000, 2100, 3100 and 4300; **One course in Microbiology:** MCB 2610; One course in Biochemistry: MCB 2000 or MCB 3010; One course in Genetics: MCB 2410, 2413, or ANSC 3121; One course in Nutrition, Immunology, or Cell Biology: ANSC 2111, NUSC 1165, MCB 2210, 4211, or AH 3121; One of the following courses: PVS 2301, 3201 or 3201W, 3341, 3501, 4351

Students must pass either PVS 3094W or 3201W to fulfill their writing in the major requirement. The advanced information literacy requirement is fulfilled by passing PVS 3094W or 3201W. There are no advanced requirements for computer technology.

Resource Economics

This major in the Department of Agricultural and Resource Economics applies analytical and decision-making skills to problems of production and distribution of food products and the management of natural resources and the environment. The Resource Economics major places a high priority on program flexibility and individualized attention. In addition to meeting the general education requirements of the University and the College, students majoring in Resource Economics are expected to take a common core of courses. Students may concentrate in one or more of the following areas: Marketing and Business Management, Environmental Economics and Policy, and International Development. Concentration areas are optional and, thus, not required to fulfill the requirements for the major. For detailed information, please refer to www.are.uconn.edu.

Competency Requirements. All Resource Economics majors must pass ARE 1150 or ECON 1200 or ECON 1201; and ARE 3150. Students must also pass either ARE 3261W or 3440W to fulfill their writing in the major requirement. The advanced information literacy requirement is fulfilled with either ARE 3261W or 3440W. There are no advanced requirements for computer technology.

Concentrations. Resource Economics majors may concentrate in one or more of the following areas: Marketing and Business Management, Environmental Economics and Policy, and International Development. Majors choosing a concentration must take at least three courses from Group A and a sufficient number from Group B so that the total number of credits earned from both groups is at least 18.

Marketing and Business Management: Group A. ARE 3210, 3215, 3222, 3225, 4217, 4275. **Group B.** ARE 3221, 3260, 3434, 3450, 4279, 4464, 4981, 4991, 4993, 4995, 4999; ECON 2411.

With the approval of the advisor, additional courses in ARE or in related fields can be used to fulfill the 36 credit requirements for the major with this area of concentration.

Environmental Economics and Policy: Group A. ARE 3260, 3434, 4444, 4462, 4464. **Group B.** ARE 3210, 3235, 3436, 3437, 3450, 4217, 4305, 4438, 4981, 4991, 4993, 4995, 4999; GEOG 2100; NRE 3245.

With the approval of the advisor, additional courses in ARE or in related fields can be used to fulfill the 36 credit requirements for the major with this area of concentration.

International Development: Group A. ARE 3260, 3434, 3437, 4305, 4444, 4464. **Group B.** ARE 3210, 3215, 4279, 4981, 4991, 4993, 4995, 4999; ANTH 3151; ECON 2456, 3421/W, 3473/W; GEOG 2100, 3100; POLS 3402, 3406, 3410; SOCI 3701; **WGSS** 3216, 2267.

With the approval of the advisor, additional courses in ARE or in related fields can be used to fulfill the 36 credit requirements for the major with this area of concentration.

Minors in Agribusiness Management, Environmental Economics and Policy, and Equine Business Management are described in the "Minors" section.

Turfgrass and Soil Science

This major offers two areas of concentration. Turfgrass Science includes the management of golf courses, athletic fields, lawns, roadsides, erosion control sites, and other areas where grasses are grown. The Soil Science option prepares students for employment with local, state and federal government agencies, as well as private consulting and research firms. Courses focus on soil identification, reactivity, root zone construction, and soil management and suitability for

different uses. (For detailed information, please refer to: <http://plantscience.uconn.edu/turf.html>.)

Students in the Soil Science concentration must pass the following courses: BIOL 1107 or 1108 or 1110; CHEM 1124Q or 1127Q; GSCI 1050; PLSC 1000; SOIL 2120 and 2125.

Must have 36 credits from the following list with a minimum of 9 credits from SOIL courses: ARE 3434; GSCI 3010, 3020, 4110, 4210; LAND 3230W; NRE 3155, 3535, 4000W, 4165; SOIL 3220, 3410, 3520, 3620, 4420; TURF 3200W.

Students in the Soil Science concentration must pass LAND 3230W or NRE 4000W or TURF 3200W to fulfill their requirement for writing in the major.

Students successfully completing these courses will have met their general education exit requirements for information literacy. Computer technology competency is satisfied by University entrance expectations.

Students in the Turfgrass Science concentration must pass the following courses: BIOL 1110; CHEM 1122, 1124Q or 1127Q; PLSC 1000, 4210, and 4215; SOIL 2120 and 2125

Students must earn a minimum of 9 additional credits in courses from the subject areas of Biology, Chemistry, Computer Science, Geoscience, Mathematics, Physics, or Statistics.

For the Turfgrass Science concentration, students must pass: TURF 1100, 3200/W, 3800; SOIL 3520, 3620

3 credits from: PLSC 3990

6 credits from: PLSC 3810, 3820, 3830, 3840

6 credits from: HORT 2430, 2750, 3410, 3420, 3640, 3650, 3660, 3760

Students in the Turfgrass Science concentration must pass TURF 3200W or HORT 2560W to fulfill their requirement for writing in the major. Alternatively, Turfgrass and Soil Science majors with a minor in Landscape Design may use LAND 3230W to fulfill their requirement for writing in the major.

Students successfully completing these courses will have met their general education exit requirements for information literacy.

Computer technology competency is satisfied by University entrance expectations.

A minor in Turfgrass Management is described in the "Minors" section.

Double Major Option. Students may elect to complete requirements for two major fields of study offered by the College of Agriculture and Natural Resources. A student selecting this option must submit a Double Major Declaration indicating primary and secondary majors. This declaration must include a tentative plan of study and requires approval by the advisors and department heads for both respective major areas of study and the Associate Dean. The approved declaration will be submitted to the Degree Auditor. The student's final plan of study will include a double major attachment to verify that the requirements have been met for both the primary and secondary majors. The transcript will identify both majors.

Primary Major: Students must meet all requirements as listed under "Requirements for a Major" (36 credit group) and all individual major requirements as listed above.

Secondary Major: Students must meet all individual major requirements as listed above and successfully complete additional course work numbered 2000 or above *not* used as part of the 36 credit group for the primary major. This group of courses must:

1. total at least 24 credits
2. be numbered 2000 or above
3. be approved by student's advisor and department head
4. be taken at the University of Connecticut
5. include at least 15 credits of College of Agriculture and Natural Resources courses
6. average at least a 2.0 Grade Point Average
7. not include more than six credits of Independent Study and Internship
8. not be taken on Pass/Fail
9. not include more than 6 credits of S/U coursework

Pre-Physical Therapy, Pre-Medical, and other Health Related Pre-professional Programs. Students preparing for professional careers in physical

therapy, human medicine, dentistry, physician's assistant and other post-baccalaureate health programs may major in Allied Health Sciences, Nutritional Sciences, or Pathobiology, as well as many other science-based majors throughout the University. Pre-professional programs in the College of Agriculture and Natural Resources are offered as structured options within majors, rather than as official, stand-alone majors. This allows students to consider multiple career goals without compromising their eligibility for admission into competitive professional programs. Physical Therapy at the University of Connecticut is offered at the graduate level. (Consult the Graduate Catalog for more information regarding admission requirements for the University of Connecticut's Doctorate in Physical Therapy Program.)

Pre-Veterinary Medicine. Students aspiring to become veterinarians generally major in either Animal Science or Pathobiology at the University of Connecticut. Animal Science includes the study of animal genetics, physiology, nutrition, medicine, products, and behavior. Pathobiology is the study of normal and abnormal biological processes in animals, including courses in anatomy, physiology, diseases, histology, virology, and microbiology. In both majors, the structured curriculum for pre-veterinary students includes courses required for veterinary college admission. Knowledgeable advisors, professional experience, networking opportunities, and – of course – students' success in rigorous course requirements have resulted in a great track record for UConn graduates being admitted to veterinary schools and colleges.

Honors Programs. University honors programs are available to qualified students in the College. Please refer to the section of this *Catalog* designated "Honors Programs" for further information.

Transfer Students. Transfer students can use transfer credits to meet General Education requirements and 2000-level course requirements in a specific major. Transfer students may apply a maximum of six credits of 2000-level work toward the 36-credit requirement for a major. These credits must be identified as courses comparable to specific University of Connecticut courses and cannot include internships, special topics, or non-specific discipline credits. Transfer students must complete at least 30 credits of 2000-level course work at the University of Connecticut, including at least 15 credits in College of Agriculture and Natural Resources courses.

Residence Requirement. It is expected that advanced course work in the major will be completed at the University of Connecticut. However, students may be eligible to use up-to six credits from other institutions in the 36-credit group if approved by their advisor and department head. These credits must be identified as courses comparable to specific University of Connecticut courses and cannot include internships, special topics, or non-specific discipline credits. Transfer students must complete at least 30 credits of 2000-level or higher course work at the University of Connecticut, including at least 15 credits in College of Agriculture and Natural Resources courses.

Exemptions and Substitutions. Students requesting an exemption from any University and/or College requirement, or a substitution for a course or requirement, should consult their advisors. Such exemptions or substitutions must be approved by the Department Head and the Associate Dean of the College and may also require approval from the Provost's Office.

Field Trips and Transportation Costs. Many courses require off-campus field trips. Students should budget money for participation.

Graduate Programs. Most departments provide graduate programs for students interested in greater specialization beyond the baccalaureate. The study may lead to a Master of Science or Doctor of Philosophy degree. Students planning for a graduate program should secure a comprehensive background in the basic sciences. For further information see the announcement of the Graduate School.