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About NC State

Introduction

Founded March 7, 1887 by the North Carolina General Assembly under the provisions of the national Land-Grant Act, North Carolina State University is now one of the nation’s preeminent research institutions and the university of choice for accomplished, high-performing students from around the world.

NC State's extensive public and private partnerships create a unique culture of collaboration to address the grand challenges facing society. The university's solution-driven research, technology and scholarship lead to new ideas, products and services. It's no wonder NC State is known for its forward-looking philosophy: Think and Do.

With more than 34,000 students and 9,000 faculty and staff, NC State is a comprehensive university known for its leadership in interdisciplinary innovation. As a leader in experiential education, NC State provides remarkable opportunities for students to put learning into practice and to develop career-ready skills.

The university is consistently ranked as a top-tier university by U.S. News & World Report and is regularly named by Princeton Review/USA Today and Kiplinger as a national top-20 best value in higher education, a ranking that combines academic quality and affordability. Because of this value, NC State students graduate with lower-than-average debt, according to U.S. News.

Beginning their freshman year, NC State students are able to explore their major right away — by conducting research alongside faculty or starting a challenging co-op or internship. NC State has a large and diverse student population with the feel of a tight-knit community.

NC State is located in the Research Triangle region, home to many of the country’s leading Fortune 500 technology, research and pharmaceutical companies. NC State’s Centennial Campus is home to more than 130 corporate and government research partners, incubator companies and NC State research units.

Mission

As a research-extensive land-grant university, North Carolina State University is dedicated to excellent teaching, the creation and application of knowledge, and engagement with public and private partners. By uniting our strengths in science and technology with a commitment to excellence in a comprehensive range of disciplines, NC State promotes an integrated approach to problem solving that transforms lives and provides leadership for social, economic and technological development across North Carolina and around the world.

Campus

NC State University is located west of downtown Raleigh on 2,099 acres. The campus acreage includes Centennial Campus on 1,105 acres and Centennial Biomedical Campus on 215 acres. West Campus includes the College of Veterinary Medicine and the stadium/arena complex. Nearby are research farms, biology and ecology sites, horticulture and floriculture nurseries and research forests that cover an additional 3,000 acres. Elsewhere across the state are research farms and 4-H camps.

Research Triangle Park

NC State is one of three nationally renowned research universities in the Triangle area, along with Duke University in Durham and the University of North Carolina at Chapel Hill. Within the 30 mile triangle formed by the three universities is Research Triangle Park, a 7,000-acre research park founded in 1959 by leaders in academia, business and government. Today, Research Triangle Park is home to some of the most innovative technology and research-based companies in the world.

Faculty

The university has 9,223 employees, including 2,778 faculty. Among the many honors and recognitions received by members of the faculty are 16 memberships in the National Academy of Sciences, 17 memberships in the National Academy of Engineering, one membership in the Institute of Medicine, and 744 members of NC State’s Academy of Outstanding Teachers.

Outreach and Extension Program

As North Carolina’s flagship research intensive, community engaged land-grant university, NC State has a unique mission to serve the citizens of this state through technical assistance, professional development, lifelong education, technology transfer, and other means of applying knowledge to real world issues and problems. Faculty, students, and staff from all ten academic colleges and other units engage in collaborative research, learning, and service partnerships with business, industry, government, and communities, in the Triangle region and across the state. Extension and engagement imperatives include economic development, environmental stewardship, K-12 education, leadership development, and entrepreneur support. NC State’s Office of Extension, Engagement, and Economic Development reaches over one million citizens annually through Cooperative Extension, Industrial Extension, McKimmon Center for Extension and Continuing Education, NC State’s Economic Development Partnership, the General Hugh Shelton Leadership Center, and the North Carolina Small Business and Technology Development Center.

Students

In the 2016 Fall Semester, the university’s head count enrollment totaled 33,755. Included in this number were 21,981 students in undergraduate degree programs, 8,961 in graduate degree programs, 393 First Professional and 2,055 non degree-seeking students. The total enrollments by college were:

- Agriculture and Life Sciences - 3,450
- Design - 791
- Education - 1,591
- Engineering - 9,383
- Natural Resources - 1,868
- Humanities and Social Sciences - 4,298
- Management - 3,552
- Sciences - 3,522
- Textiles - 1,181
- Veterinary Medicine - 462
- Division of Academic and Student Affairs - 1,257

The student population included 2,075 African American students, 4,414 other non-white students 15,194 female students. Students at the university come from 52 states (including DC and territories) and 115
foreign countries. The international enrollment is a distinctive feature of the institution as 3,893 international students give the campus a cosmopolitan atmosphere.

Associations, Accreditation

Associations

The university is a member of the Association of Public and Land-grant Universities, the American Council on Education, the Association of Governing Boards of Universities and Colleges, the Association of American Colleges and Universities, the Education Advisory Board, the Engagement Scholarship Consortium, the National Association of College and University Business Officers, the Oak Ridge Associated Universities, the Southern Association of Colleges and Schools Commission on Colleges, Campus Compact, the University Professional and Continuing Education Association, and the Cooperating Raleigh Colleges.

Accreditation

NC State University is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) to award associate’s, baccalaureate, master’s and doctoral degrees. Contact SACSCOC at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call (404) 679-4500 for questions about the accreditation of NC State University.

We are providing this contact information here to enable interested constituents (1) to learn about the accreditation status of NC State, (2) to file a third-party comment at the time of NC State’s decennial review, (3) to file a complaint against the institution for alleged non-compliance with a standard or requirement. Normal inquiries about NC State, such as admissions requirements, financial aid, educational programs, etc., should be addressed directly to the university and not the SACSCOC’s office.

In addition, many of the university’s professional programs and departments are accredited by national professional associations, including:

Specialized Academic Program Accreditation (https://oirp.ncsu.edu/planning-evaluation/accreditation/specialized-program-accreditation)

College of Agriculture & Life Sciences

<table>
<thead>
<tr>
<th>Program Name</th>
<th>Accrediting Body</th>
<th>Last Yr Accred</th>
<th>Next Yr Accred</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Education (BS)*</td>
<td>Council for the Accreditation of Educator Preparation (CAEP)</td>
<td>2015</td>
<td>2022</td>
</tr>
<tr>
<td>Biological Engineering (BS)**</td>
<td>Engineering Accreditation Commission of ABET</td>
<td></td>
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</tr>
</tbody>
</table>

* Accredited through the College of Education
** Accredited through the College of Engineering

College of Design (https://oirp.ncsu.edu/planning-evaluation/accreditation/specialized-program-accreditation)

<table>
<thead>
<tr>
<th>Program Name</th>
<th>Accrediting Body</th>
<th>Last Yr Accred</th>
<th>Next Yr Accred</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture (B.Arch, M.Arch)</td>
<td>National Architectural Accreditation Board (NAAB)</td>
<td>2012</td>
<td>2018</td>
</tr>
<tr>
<td>Graphic Design (BGD, MGD)</td>
<td>National Association of Schools of Art and Design (NASAD)</td>
<td>2012</td>
<td>2021</td>
</tr>
<tr>
<td>Industrial Design (BID, MID)</td>
<td>National Association of Schools of Art and Design (NASAD)</td>
<td>2012</td>
<td>2021</td>
</tr>
<tr>
<td>Landscape Architecture (BLA)</td>
<td>Landscape Architectural Accreditation Board (LAAB)</td>
<td>2016</td>
<td>2022</td>
</tr>
<tr>
<td>Landscape Architecture (MLA)</td>
<td>Landscape Architectural Accreditation Board (LAAB)</td>
<td>2016</td>
<td>2022</td>
</tr>
</tbody>
</table>

College of Education

<table>
<thead>
<tr>
<th>Program Name</th>
<th>Accrediting Body</th>
<th>Last Yr Accred</th>
<th>Next Yr Accred</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counselor Education (PhD, MEd, MS)</td>
<td>Council for Accreditation of Counseling and Related Educational Programs (CACREP)</td>
<td>2012</td>
<td>2020</td>
</tr>
<tr>
<td>All teacher education programs, School Counselor (MEd, MS), School Administration (MSA) and School of Social Work (MR) at initial and advanced levels.</td>
<td>Council for the Accreditation of Educator Preparation (CAEP)</td>
<td>2015</td>
<td>2022</td>
</tr>
</tbody>
</table>
### College of Engineering

<table>
<thead>
<tr>
<th>Program Name</th>
<th>Accrediting Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerospace Engineering (BS)</td>
<td>Engineering Accreditation Commission of ABET</td>
</tr>
<tr>
<td>Biological Engineering (BS)</td>
<td>Engineering Accreditation Commission of ABET</td>
</tr>
<tr>
<td>Biomedical Engineering (BS)</td>
<td>Engineering Accreditation Commission of ABET</td>
</tr>
<tr>
<td>Chemical Engineering (BS)</td>
<td>Engineering Accreditation Commission of ABET</td>
</tr>
<tr>
<td>Civil Engineering (BS)</td>
<td>Engineering Accreditation Commission of ABET</td>
</tr>
<tr>
<td>Computer Engineering (BS)</td>
<td>Engineering Accreditation Commission of ABET</td>
</tr>
<tr>
<td>Computer Science (BS)</td>
<td>Computing Accreditation Commission of ABET</td>
</tr>
<tr>
<td>Construction Engineering and Management (BS)</td>
<td>Engineering Accreditation Commission of ABET</td>
</tr>
<tr>
<td>Electrical Engineering (BS)</td>
<td>Engineering Accreditation Commission of ABET</td>
</tr>
<tr>
<td>Engineering - Mechatronics Concentration (BS) (Joint Program with UNC-Asheville)</td>
<td>Engineering Accreditation Commission of ABET</td>
</tr>
<tr>
<td>Engineering- Mechanical Engineering Systems (BS)</td>
<td>Engineering Accreditation Commission of ABET</td>
</tr>
<tr>
<td>Environmental Engineering (BS)</td>
<td>Engineering Accreditation Commission of ABET</td>
</tr>
<tr>
<td>Industrial Engineering (BS)</td>
<td>Engineering Accreditation Commission of ABET</td>
</tr>
<tr>
<td>Materials Science and Engineering (BS)</td>
<td>Engineering Accreditation Commission of ABET</td>
</tr>
<tr>
<td>Mechanical Engineering (BS)</td>
<td>Engineering Accreditation Commission of ABET</td>
</tr>
<tr>
<td>Nuclear Engineering (BS)</td>
<td>Engineering Accreditation Commission of ABET</td>
</tr>
<tr>
<td>Paper Science and Engineering (BS)</td>
<td>Engineering Accreditation Commission of ABET</td>
</tr>
<tr>
<td>Textile Engineering (BS)</td>
<td>Engineering Accreditation Commission of ABET</td>
</tr>
</tbody>
</table>

### Poole College of Management

<table>
<thead>
<tr>
<th>Program Name</th>
<th>Accrediting Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting (BS, MAC)</td>
<td>Association to Advance Collegiate Schools of Business (AACSB International)</td>
</tr>
<tr>
<td>Business Administration (BS, MBA)</td>
<td>Association to Advance Collegiate Schools of Business (AACSB International)</td>
</tr>
<tr>
<td>Master of Global Innovation Management (MGIM)</td>
<td>Association to Advance Collegiate Schools of Business (AACSB International)</td>
</tr>
</tbody>
</table>

### College of National Resources

<table>
<thead>
<tr>
<th>Program Name</th>
<th>Accrediting Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest Management (BS)</td>
<td>Society of American Foresters</td>
</tr>
<tr>
<td>Paper Science &amp; Engineering (PSE)</td>
<td>Engineering Accreditation Commission of ABET</td>
</tr>
<tr>
<td>Parks, Recreation &amp; Tourism Management (BS)</td>
<td>Council on Accreditation of Parks, Recreation, Tourism &amp; Related Professions</td>
</tr>
<tr>
<td>Professional Golf Management (BS)</td>
<td>Professional Golf Association of America</td>
</tr>
</tbody>
</table>

### College of Humanities & Social Sciences

(https://oirp.ncsu.edu/planning-evaluation/accreditation/specialized-program-accreditation)

<table>
<thead>
<tr>
<th>Program Name</th>
<th>Accrediting Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Factors/ Ergonomics Psychology (PhD)</td>
<td>Human Factors and Ergonomics Society (HFES)</td>
</tr>
<tr>
<td>Public Administration (MPA)</td>
<td>National Association of Schools of Public Affairs and Administration (NASPAA)</td>
</tr>
<tr>
<td>Psychology (PhD)</td>
<td>American Psychological Association</td>
</tr>
<tr>
<td>Social Work (BSW, MSW)</td>
<td>Council on Social Work Education</td>
</tr>
<tr>
<td>Spanish/French Education (LAA, LTA, LTF)</td>
<td>Council for the Accreditation of Educator Preparation (CAEP)</td>
</tr>
</tbody>
</table>
Wood Products

(BS)

Society of Wood Science & Technology

2015

2025

College of Sciences

Program Name

Accrediting
Body

Last Yr Accred

Next Yr Accred

Chemistry (BA, BS)

American Chemical Society (ACS)

2012

2017

College of Textiles

Program Name

Accrediting
Body

Last Yr Accred

Next Yr Accred

Fashion Development and Product Management

American Apparel & Footwear Association

2014

2019

Textile Engineering (BS)

Engineering Accreditation Commission of ABET

College of Veterinary Medicine

Program Name

Accrediting
Body

Last Yr Accred

Next Yr Accred

Veterinary Medicine (DVM)

American Veterinary Medical Association Council on Education (AVMA COE)

2014

2021

Administrative Program Accreditation and Certification (https://oirp.ncsu.edu/planning-evaluation/accreditation/specialized-program-accreditation)

https://oirp.ncsu.edu/planning-evaluation/accreditation/specialized-program-accreditation

Division of Academic & Student Affairs

Program Name

Accrediting
Body

Last Yr Accred

Next Yr Accred

Academic Skills Enhancement Program within the Academic Support Program for Student Athletes

International Tutor Program Certification within the College Reading & Learning Association (CRLAS)

2014

2019

Cooperative Education (On-the-job experience in chosen field)

Council for Cooperative Education

2016

2022

Counseling Center

International Association of Counseling Services, Inc. (IACS)

2015

2023

Student Health Services

Accreditation Association for Ambulatory Health Care (AAAHHC)

2016

2019

Student Health Services

Commission on Office Laboratory Assessment (COLA)

2016

2018

UG Tutorial Center Program

College Reading & Learning Association (CRLA) CRLA’s International Tutor Program Certification

2014

2019

Environmental Health & Public Safety

Program Name

Accrediting
Body

Last Yr Accred

Next Yr Accred

Campus Police

Commission on the Accreditation of Law Enforcement Agencies

2016

2020

Campus Police

International Association of Campus Law Enforcement Administrators (IACLEA)

2016

2020

College of Veterinary Medicine

Program Name

Accrediting
Body

Last Yr Accred

Next Yr Accred

Veterinary Health Complex

American Veterinary Medical Association performs accreditation inspections

Inspection 2014

Inspection 2021

Lab Animal Facilities

Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) Performs accreditation inspections.

Inspection 2015

Inspection 2018

Administrative Program Accreditation and Certification (https://oirp.ncsu.edu/planning-evaluation/accreditation/specialized-program-accreditation)

https://oirp.ncsu.edu/planning-evaluation/accreditation/specialized-program-accreditation

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Program Name

Accrediting
Body

Last Yr Accred

Next Yr Accred

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2023

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2016

2019

Student Health Services

Commission on Office Laboratory Assessment (COLA)

2016

2018

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College Reading & Learning Association (CRLA) CRLA’s International Tutor Program Certification

2014

2019

Environmental Health & Public Safety

Program Name

Accrediting
Body

Last Yr Accred

Next Yr Accred

Campus Police

Commission on the Accreditation of Law Enforcement Agencies

2016

2020

Campus Police

International Association of Campus Law Enforcement Administrators (IACLEA)

2016

2020

College of Veterinary Medicine

Program Name

Accrediting
Body

Last Yr Accred

Next Yr Accred

Veterinary Health Complex

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Inspection 2014

Inspection 2021

Lab Animal Facilities

Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) Performs accreditation inspections.

Inspection 2015

Inspection 2018
Equal Opportunity and Non-Discrimination Policy

It is the policy of the State of North Carolina to provide equality of opportunity in education and employment for all students and employees. Educational and employment decisions should be based on factors that are germane to academic abilities or job performance. North Carolina State University ("NC State") strives to build and maintain an environment that supports and rewards individuals on the basis of relevant factors such as ability, merit and performance. Accordingly, NC State engages in equal opportunity and affirmative action efforts and prohibits discrimination, harassment and retaliation, as defined by NC State's Equal Opportunity and Non-Discrimination Policy (POL 04.25.05) (https://policies.ncsu.edu/policy/pol-04-25-05).*

NC State will promptly, thoroughly and impartially respond to all complaints of Discrimination, Harassment and Retaliation.

Any individual with a complaint of Discrimination, Harassment or Retaliation should follow NC State's Discrimination, Harassment and Retaliation Complaint Procedure (REG 04.25.02) (https://policies.ncsu.edu/regulation/reg-04-25-02).

Substantiated instances of Discrimination, Harassment and Retaliation, as defined in the policy, are violations of the policy and will not be tolerated by NC State.

For more information, please contact:

Office for Institutional Equity and Diversity
231 Winslow Hall
Box 7530
NC State University
Raleigh, NC 27695-7530
Phone: 919.515.3148
Website: www.ncsu.edu/oied

* This policy is established in accordance with 41 CFR Part 60 and is implemented in accordance with applicable laws and their amendments, including but not limited to, Title VI and Title VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Executive Order 11246, the Age Discrimination in Employment Act of 1975, Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, the Vietnam Era Veterans' Readjustment Assistance Act of 1974, the Civil Rights Restoration Act of 1988, North Carolina General Statutes Chapters 116 and 126.
Admission and Campus Resources

NC State is a member of the Common Application (http://www.commonapp.org) and the Coalition for Access, Affordability, and Success (http://www.coalitionforcollegeaccess.org). Students may choose to apply through either application system. Undergraduate Admissions implements a notification date system for both domestic freshman and transfer applicants and international applicants are notified as decisions are made. Freshmen are strongly encouraged to apply during the fall of their senior year in high school.

Application Dates and Deadlines (https://admissions.ncsu.edu/apply/dates-and-deadlines)

Applicants for the College of Design and Fashion and Textile Design program must submit a complete application by October 15 and list it as their first choice major.

All applications for the spring semester should be submitted prior to October 1. The College of Design, College of Engineering, and Elementary Education do not accept applications for the spring semester.

Students are notified of their decision on their wolfPAW account (https://wolfpaw.ncsu.edu/Default.asp) and admitted students (http://admissions.ncsu.edu/admitted-students) must confirm their enrollment by May 1.

The Undergraduate Admissions website (http://admissions.ncsu.edu) provides more information on the application review process and procedure.

New Student Programs

3219 Broughton Hall
2601 Katharine Stinson Drive
Campus Box 7525
Raleigh, NC 27695-7525
Phone: (919) 515-1234 Fax: (919) 515-5844

Michael Coombes, Director

New Student Programs now offers a newly admitted first-year and transfer undergraduate students introductory assistance and continuing services that will aid in their transition to NC State. Our programs expose students to broad educational opportunities, academic expectations and resources, as well as social and developmental opportunities. Most importantly, we begin the process of integrating students into the life of the institution.

Freshman Admission

Admission to the university is highly competitive. Applicants are asked to indicate their first and second choices for a curriculum, including undeclared majors within a college, or, if undecided, to indicate their choice of participating in University College Exploratory Studies. Applicants not admitted in their first curriculum choice will be reviewed for admission in their second curriculum choice. The admissions decision is based on a holistic review of a complete application. Of primary importance is the high school record, including the level and difficulty of the courses taken, the overall grade point average, rank in class, and scores on the SAT or the ACT. Extracurricular involvement, leadership, and many other factors are also considered.

In addition, the Board of Governors of the University of North Carolina System has determined that the Minimum Course Requirements (MCR) for all constituent institutions, including NC State, shall include a high school diploma or its equivalent and the following course units taken in high school:

1. Six course units in language, including
   - Four units in English
   - Two units in a language other than English
2. Four course units of mathematics in any of the following combinations:
   - Algebra I and II, Geometry, and one unit beyond Algebra II
   - Algebra I and II, and two units beyond Algebra II or
   - Integrated Math I, II, III and one unit beyond Integrated Math III
3. Three course units in science, including
   - At least one unit in a life or biological science, and
   - At least one unit in physical science, and
   - At least one laboratory course
4. Two course units in social studies, including
   - One unit in U.S. history
   - One other unit in social studies

These are minimum course requirements. Competitive applicants will typically exceed these minimum courses. It is recommended that every student take a foreign language course and a mathematics course in their senior year.

NC State does not conduct individual interviews with applicants, however, a prospective student is always welcome to visit the Office of Undergraduate Admissions. Freshman information sessions and student led campus tours are available Monday through Friday at the Joyner Visitor Center (http://admissions.ncsu.edu/visit/schedule-your-visit).

College of Design and Fashion and Textile Design

Students interested in a College of Design major or Fashion and Textile Design, should list that program as a first choice major and submit a complete application by October 15. A portfolio and additional essay is required by November 1. Domestic freshman applying for the Design Studies major, the final deadline is January 15. Design applications are reviewed by the Office of Undergraduate Admissions and, if found to be academically competitive, are forwarded to the College of Design (http://design.ncsu.edu/admissions) or College of Textiles (https://textiles.ncsu.edu/tatm/fashion-and-textile-design) for review. To assess creative potential, candidates must present a portfolio of works created inside and/or outside school. High school art classes are not required for acceptance, but they are encouraged. Design applicants will be notified of a final admissions decision by the end of March.

Professional Golf Management (PGM)

Students are accepted into the PGM program by being competitive in the NC State University admissions process and by meeting golf handicap and recommendation requirements. Handicap verification and the letter of recommendation must be submitted directly to the PGM office when the application is submitted to Undergraduate Admissions.
Two-Year Agricultural Institute
Requirements for admission to the Agricultural Institute (http://harvest.cals.ncsu.edu/aginstitute), a two-year terminal program, include graduation from high school with a 2.0 minimum grade point average or successful completion of the high school equivalency examination administered by the State Department of Public Instruction, and one letter of recommendation. SAT scores are not required. Completion of coursework in the Agricultural Institute leads to an Associate of Applied Science (A.A.S.) degree.

Standardized Test Scores
Freshman applicants must submit scores from the SAT or the ACT Assessment to complete their application. We do not require the writing section for either test. Applicants’ scores must be sent directly from the testing agency to NC State (SAT Code #5496, ACT code #3164). Prospective students may find more information and applications for the tests online: www.collegeboard.com (http://www.collegeboard.com) or www.act.org (http://www.act.org).

Credit Opportunities
Students can jump-start their college careers by acquiring pre-enrollment credits by one or more of the following means: (1) by passing a proficiency examination administered by a teaching department at NC State; (2) by meeting a specific minimum score on certain Advance Placement Program (AP) or International Baccalaureate (IB) examinations; and/or (3) by attaining a minimum score on certain College Level Examination Program (CLEP) subject tests. Learn about the recognized test curriculum, accepted test scores and credit awarded at admissions.ncsu.edu/credit-opportunities.

Out-of-State Students
Undergraduate applicants from outside North Carolina are reviewed using the same criteria as applicants from North Carolina. NC State is limited to enrolling not more than 18 percent of total new undergraduate students from outside the state as set forth by the University of North Carolina System.

Transfer Students
NC State welcomes transfer applicants, and in recent years, more than 20 percent of our graduates started their college programs at other institutions. A transfer student should present at least 30 semester hours (or 45 quarter hours) of “C” or better college level work, including an English class and a college level math class applicable to the requested degree program. Additional specific course work is required for most programs. The grade point average required for consideration varies depending on the requested program of study. Transfer students must be eligible to return to the last institution previously attended and must submit individual transcripts from each institution. View the recommendations for competitive applicants (https://admissions.ncsu.edu/apply/admission-review/transfer-admission-review-process/#AdmissionsConsiderations) on the transfer admissions website.

College transcripts are required from each institution attended and are evaluated for credit that is transferable to the university as part of the admission application review. A grade of “C-” or better is required before a course may be considered for credit. Applicants can search our transfer course equivalency database (https://admissions.ncsu.edu/apply/admission-review/transfer-admission-review-process/#transfercredits) to get an initial idea of which course credits from other institutions transfer to NC State. An official course evaluation is provided to students once they are admitted.

Overview:
International students must apply online using the Common Application at commonapp.org (http://commonapp.org) or the Coalition Application at coalitionforcollegeaccess.org (http://www.coalitionforcollegeaccess.org). Undergraduate Admissions implements a notification date system for both domestic freshman and transfer applicants, and international applicants are notified as decisions are made. Freshmen are strongly encouraged to apply during the fall of their senior year in high school. Learn more about the admissions process and what it takes to be a competitive applicant at admissions.ncsu.edu/international.

Freshman Application Deadlines
• Early Action: October 15
• Notification Date: January 30
• Regular Decision: January 15
• Notification Date: March 30

Transfer Application Deadlines
• Regular Decision: February 15
• Notification Date: April 15

International Application Deadlines
• Early Action: October 15
• Regular Decision: January 15

Students are notified of their decision on their wolfPAW account and admitted students (http://admissions.ncsu.edu/admitted-students) must confirm their enrollment by May 1.

The Undergraduate Admissions website (http://admissions.ncsu.edu) provides more information on the application review process and procedure.

International students:
NC State welcomes international student applications and has a long history of enrolling outstanding international students. International students must apply online using The Common Application at commonapp.org (http://commonapp.org) or the Coalition Application at coalitionforcollegeaccess.org. International applicants must demonstrate competitive academic credential, evidence of English language proficiency, and adequate financial resources before a visa certificate can be issued.
**English Proficiency:**

**English proficiency can be demonstrated by meeting these requirements:**

Options for Meeting Requirements -

- **TOEFL IBT (code: 5496)**
  - Scores required for full undergraduate admission: 85 or higher (minimum of 18 in each sub score)
  - Scores required for conditional admission: 60 or higher

- **TOEFL Paper Based (code: 5496)**
  - Scores required for full undergraduate admission: 563 or higher
  - Scores required for conditional admission: 500 or higher

- **IELTS Academic**
  - Scores required for full undergraduate admission: 6.5 or higher (minimum of 6.5 in each sub score)
  - Scores required for conditional admission: 6.0

- **Pearson Test of English (PTE) Academic**
  - Scores required for full undergraduate admission: 62 or higher (minimum of 53 in each sub score)
  - Scores required for conditional admission: 45

- **Intensive English Program (http://iep.oia.ncsu.edu)**
  - Completion of Level 6 with a grade of B or higher and meet all other exit criteria

- **English Composition I and II from an accredited U.S. College or university**
  - Grade of C or higher

**Financial and Immigration Information**

All international applicants seeking an F-1 or J-1 student visa must submit a Certificate of Financial Responsibility (CFR) as part of the admission process. The purpose of this form is to certify financial solvency for the student throughout his/her program of study - this is a federal requirement that must be met before the Office of Undergraduate Admissions can issue any visa certificates.

In addition, applicants deemed admissible who are already in the U.S. must also fill out a Visa Clearance Form (VCF). This includes international applicants who are in a nonimmigrant visa category other than F-1 or J-1 (ex: H-4, L-2, DACA, E-2, Pending Permanent resident etc.). These applicants are not required to complete a CFR, unless they plan to change to F-1 or J-1 student status (if eligible).

CFR and VCF forms are reviewed by the Office of Undergraduate Admissions upon receipt. If the information provided by the applicant is incomplete or not acceptable (e.g. sponsor and bank official signatures, bank statements, etc.), the applicant will be notified that his/her documents were not approved and why. Notification is done via e-mail. The applicant will then have an opportunity to correct the problem(s) and resubmit the form(s). Applicants can check the status of their applications through their WolfPAW account.

Once the applicant is considered admitted (fully or conditionally) to the University, the Office of Undergraduate Admissions mails out the appropriate Certificate of Eligibility (Form I-20 for an F-1 visa or Form DS-2019 for a J-1 visa) along with the full admission letter and other important pre-arrival information. Newly fully admitted international students will also receive information and guidance from the Office of International Services (OIS) via email prior to their arrival to NC State. Conditionally admitted international students will received information from the Intensive English Program (IEP) prior to their arrival as well.

New F-1 and J-1 international students must check-in with the Office of International Services upon arrival to campus and attend the New International Student Orientation, which is scheduled a few days before the semester begins.

New international students who are accepted to NC State have the opportunity to participate in a Summer Start program during the month of July before fall classes begin. More information can be found here. https://newstudents.dasa.ncsu.edu/summerstart/

For more information regarding the CFR and VCF please contact:

**Pascale Toussaint**
North Carolina State University
International Admissions
Phone: 919-513-3446

**Administration and Offices**

**Office of the Chancellor**

W. Randolph Woodson, Chancellor
PJ Teal, Secretary of the University

**Office of the Provost and Executive Vice Chancellor**

Warwick A. Arden, Provost and Executive Vice Chancellor
Louis D. Hunt, Jr., Senior Vice Provost for Enrollment Management and Services and University Registrar

**Office of the Provost and Executive Vice Chancellor**

W. Randolph Woodson, Chancellor
PJ Teal, Secretary of the University

For more information regarding the CFR and VCF please contact:

**Pascale Toussaint**
North Carolina State University
International Admissions
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**Administration and Offices**

**Office of the Chancellor**

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PJ Teal, Secretary of the University

**Office of the Provost and Executive Vice Chancellor**

Warwick A. Arden, Provost and Executive Vice Chancellor
Louis D. Hunt, Jr., Senior Vice Provost for Enrollment Management and Services and University Registrar
Duane Larick, Senior Vice Provost for Academic Strategy and Resource Management
Mary Lelik, Senior Vice Provost for Institutional Research and Planning
Thomas K. Miller, Senior Vice Provost for Academic Outreach and Entrepreneurship
Bailian Li, Vice Provost for International Affairs
Linda McCabe Smith, Vice Provost for Institutional Equity and Diversity
Susan K. Nutter, Vice Provost and Director of the NCSU Libraries
Margery Overton, Vice Provost for Academic Strategy
Katharine Stewart, Vice Provost for Faculty Affairs
Alice S. Warren, Vice Provost for Continuing Education, and Interim Vice Provost for Outreach and Engagement
Lisa Zapata, Vice Provost for Student Development, Health and Wellness

**College of Agriculture and Life Sciences**

Richard H. Linton, Dean
Sylvia Blankenship, Senior Associate Dean for Administration
Steve Lommel, Associate Dean for Research and Director of NC Agricultural Research Service
A. Richard Bonanno, Associate Dean for Cooperative Extension Service
John Dole, Interim Associate Dean and Director for Academic Programs
Joyce Munro, Assistant Dean for Business Operations
Rebecca Zuvich, Assistant Dean of CALS Personnel
Keith Oakley, Executive Director for College Advancement

**College of Design**
Mark Hoversten, Dean
Arthur Rice, Associate Dean
Tameka Whitaker, Assistant Dean for Student and Academic Services
Felicia Womack, Assistant Dean for Budget and Administration
Celen Pasalar, Assistant Dean for Research and Extension
Jean Marie Livaudais, Assistant Dean of External Relations

**College of Education**
Mary Ann Danowitz, Dean
Ellen S. Vasu, Associate Dean of Academic Affairs
Paula Szitaj, Associate Dean for Research and Innovation
Lilia Collazo, Assistant Dean for Finance
Michael J. Maher, Assistant Dean for Professional Education and Accreditation
Anona Smith Williams, Assistant Dean for Student Success and Strategic Community Engagement

**College of Engineering**
Louis A. Martin-Vega, Dean
John G. Gilligan, Executive Associate Dean of Engineering, Research and Graduate Programs
Jerome P. Lavelle, Associate Dean of Academic Affairs
Douglas S. Reeves, Associate Dean of Graduate Programs
Christine Grant, Associate Dean of Faculty Advancement
Jennifer Weston Cox, Director of Communication, Engineering Communications
Brian E. Campbell, Assistant Dean of Development and College Relations
Virginia Teachey, Assistant Dean of Finance and Business Management
Connie L. Reno, Assistant Dean of Personnel and Administration
Wendy Silver, Executive Assistant to the Dean
Tracy Brown, Executive Assistant to the Executive Associate Dean

**College of Humanities and Social Sciences**
Jeffery P. Braden, Dean
Deanna Patricia Dannels, Associate Dean of Academic Affairs
Thomas A. Birklund, Associate Dean for Research, Engagement, Extension and Economic Development
Karen R. Young, Assistant Dean for Academic Affairs and Director of Undergraduate Programs
Juliana Makuchi Nlah-Abbenyi, Assistant Dean for Diversity
Betty A. Byrum, Assistant Dean for Finance and Administration
Lauren R. Kirkpatrick, Director of Communication
Justin Daves, Director of College Facilities
Marcy Engler, Executive Director of Development
Missy Seate, Director of Research Administration
Dara Leeder, Director of Student Recruitment and Retention

**Poole College of Management**
Annette Ranft, Dean
Tamah Morant, Associate Dean of Undergraduate Programs
Steve Allen, Associate Dean of Graduate Programs and Research
Annette Egire, Assistant Dean of Budget and Finance

**College of Natural Resources**
Mary C. Watzin, Dean
Adrianna G. Kirkman, Associate Dean for Academic Affairs
Robert E. Bardon, Associate Dean for Extension
Marian McCord, Associate Dean for Research
Lara Brown de Fuenmayor, Assistant Dean for College Advancement
Sandy Jones, Assistant Dean for Finance and Business

**College of Sciences**
William L. Ditto, Dean
David G. Bristol, Senior Associate Dean for Administration
Jo-Ann D. Cohen, Associate Dean for Academic Affairs
John Blondin, Associate Dean for Research
Brock Matthews, Assistant Dean for Advancement
Jamila S. Simpson, Assistant Dean for Diversity and Student Services
Lee Ann DeRita, Assistant Dean for Business Operations
Nikki Price, Assistant Dean for Culture, Talent and Human Resources
Jacqueline Hawkins-Morton, Director of Advising
Michael C. Smith, Director of Undergraduate Enrollment
Katherine C. Titus-Becker, Director of Women in Science and Engineering
Pamela Lowe, Director of Development
Maria Gregg, Director of Development, Alumni and Donor Relations
Nate DeGraff, Director of Marketing and Communications
Debbie Carraway, Director of Information Technology
Holly Menninger, Director of Public Science
Jason Painter, Director of the Science House
Jennifer Teixeira, Director of Research Administration

**College of Textiles**
David Hinks, Dean
Nancy Cassill, Associate Dean for Academic Programs
Behnam Pourdeyhimi, Associate Dean for Industry Research and Extension
Xiangwu Zhang, Associate Dean for Research

**College of Veterinary Medicine**
D. Paul Lunn, Dean
Jennifer Neel, Interim Associate Dean and Director of Academic Affairs
Steven L. Marks, Associate Dean and Director of Veterinary Medical Services
Kathryn M. Meurs, Associate Dean and Director of Research and Graduate Programs
Dianne Dunning, Associate Dean for Advancement
Greta Johansen, Assistant Dean for Business and Finance
Sheri Renno, Assistant Dean for Human Resources
Jeffrey Huckel, Director of Student Services

**The Graduate School**
Maureen Grasso, Dean
Peter Harries, Senior Associate Dean
Michael Carter, Associate Dean for Program Evaluation
Laura Demarse, Assistant Dean for Professional Development
David Shafer, Assistant Dean for Outreach and Diversity
Lian Lynch, Assistant Dean for Student Administration and Academic Affairs
Michael Walker, Assistant Dean for Finance and Operations

Distance Education and Learning Technology Applications (DELTa)

Thomas K. Miller, Senior Vice Provost for Academic Outreach & Entrepreneurship
Donna Petherbridge, Associate Vice Provost for Instructional Technology Support and Development
Rebecca Swanson, Associate Vice Provost for Distance and Distributed Education
Kay Zimmerman, Associate Vice Provost for Marketing & Partnership Development
Jessie Sova, Assistant Vice Provost for Business Operations

Division of Academic & Student Affairs

Mike Mullen, Vice Chancellor & Dean
Lisa P. Zapata, Senior Associate Vice Chancellor for Student Development, Health and Wellness
Barry Olson, Associate Vice Chancellor of DASA Business Administration
Holly Durham, Associate Vice Chancellor of DASA Financial Services
Beth Buck, Associate Vice Chancellor of DASA Human Resources
Katie Sheridan, Assistant Dean and Director, Academic Support for Student Athletes
Nicole Peterson, Executive Director of Development
Marsha Boyd Pharr, Executive Director of TRIO Programs
Dan Perry, Director, Alcohol & Other Drug Prevention Education
Jill Orr, Director, Arts Development
Rich Holly, Director, Arts NC State
Dr. Arnold Bell, Director, Career Development Center
Melissa Barnes, Director, Center for Student Leadership, Ethics & Public Service
Patti Baynes, Director, College Advising Corps
Monica Osburn, Director, Counseling Center
George Thomas, Director, Crafts Center
Tara Mullins, Director, Dance Program
Mark Newmiller, Director, Disabilities Services Office
Meghan Teten, Director, EcoVillage
Kim Outing, Director, Exploratory Studies Program
Elizabeth A. Nelson, Director, First Year Inquiry
Shelly Brown Dobek, Director, Fraternity and Sorority Life
Roger Manley, Director, Gregg Museum of Art & Design
Nick Drake, Director, Military & Veterans Services
Sharon Moore, Director, NC State Live
Michael Coombes, Director, New Student Programs
Li Marcus, Director, Office of Undergraduate Courses & Curricula and University Academic Standards
Chris Ashwell, Director, Office of Undergraduate Research
Leslie Dare, Director of Technology Services
Susan Grant, Director of University Housing
Pete Fraccaroli, Director of Facilities Planning & Management
Justin Hammond, Director of Marketing and Communications
Susan Carson, Director of THINK Programs
Carrie Zelma, Director, Office of Assessment
Leah Arnett, Director, Student Health Services
Pam Gerace, Director, Student Legal Services
Patrick Neal, Director, Student Media Advising
Courtney Simpson, Director, TRIO Programs
Katherine Fuller, Director, Ticket Central
Sean Cassidy, Interim Director, University Honors Program & University Scholars Program

Eric Hawkes, Director, University Recreation
John McIlwee, Director, University Theatre
Barbie Windom, Director, University Tutorial Center

Division of Enrollment Management and Services

Louis D. Hunt, Jr., Senior Vice Provost for Enrollment Management and Services, and University Registrar
Angela I. Brockelsby, Director of Communications and Marketing
Thomas H. Griffin, Associate Vice Provost and Director of Undergraduate Admissions
Allison J. Medlin, Director of the Goodnight Scholars Program
Krista Ringer, Director of Scholarships and Financial Aid
Shawn P. Smith, Assistant Vice Provost for Financial Operations and Audit
Trey Standish, Senior Data Research Analyst
Steven White, Associate Vice Provost for Enrollment Systems and Operations

Intercollegiate Athletics

Deborah A. Yow, Director

International Affairs

Bailian Li, Vice Provost for International Affairs
Ingrid R. Schmidt, Associate Vice Provost for International Affairs
Michael J. Bustle, Associate Vice Provost for International Affairs
John Baugh, Director, North Carolina Japan Center
Elizabeth James, Director, International Services
Anna Dunaway, Director, Confucius Institute
Jeong Powell, Director, International Admissions
Karín Sandler, Director, Intensive English Program
Andrew Stringer, Director, Global Health Initiative

McKimmon Center for Extension and Continuing Education

Alice S. Warren, Vice Provost for Continuing Education
Yevonne Brannon, Executive Director, Center for Urban Affairs and Community Services
Chip Futrell, Director, Continuing and Professional Education
Tricia Inlow-Hatcher, Director, Osher Lifelong Learning Institute

The NCSU Libraries

Susan K. Nutter, Vice Provost and Director of Libraries
Carolyn Argentati, Deputy Director of Libraries

Office of Finance and Administration

Scott R. Douglass, Vice Chancellor for Finance and Administration
Amy Mull, Director of Administration, Communication & Planning
Missie Davis, Executive Assistant
Dan Adams, Associate Vice Chancellor for Campus Enterprises
Barbara Moses, Associate Vice Chancellor for Budget & Resource Management
David Rainer, Associate Vice Chancellor for Environmental Health and Public Safety
Doug Morton, Associate Vice Chancellor for Facilities
Mary Peloquin-Dodd, Associate Vice Chancellor for Finance & University Treasurer
Marie Williams, Associate Vice Chancellor for Human Resources
exploration experience. AAS also maintains an extensive and up-to-date course for students who need a structured major assistance may request to transfer into AAS (undesignated status) or minors, and academic policies. Students who need long-term advising provide current information on general education, declaring majors and/academic advisors rotate through a daily walk-in schedule. AAS advisors students who are exploring a change of major or needing advising into one centralized entity. Academic Advising Services (AAS) offers face-to-face, telephone, virtual, and email academic advising to NC State University degree seeking students who are exploring a change of major or needing advising assistance as they transition to a new major. Cross-curricular academic advisors rotate through a daily walk-in schedule. AAS advisors provide current information on general education, declaring majors and/ or minors, and academic policies. Students who need long-term advising assistance may request to transfer into AAS (undesignated status) and be assigned to an AAS advisor. AAS offers a Career Exploration and Development course for students who need a structured major exploration experience. AAS also maintains an extensive and up-to-date advising FAQ database on the AAS webpage, a great resource for all students and advisors.
Academic Support Program for Student Athletes (https://aspsa.dasa.ncsu.edu)

200 Case Academic Center
240 Jeter Drive
Campus Box 7104
Raleigh, NC 27695-7104
Phone: 919-515-2464 Fax: 919-515-1619
Website: https://aspsa.dasa.ncsu.edu/about/

Katie Graham, Assistant Dean

The Office of Academic Support Program for Student Athletes (ASPSA) is a comprehensive support program that strives to meet the academic, personal and professional development needs of all student-athletes, promoting excellence and effectiveness in undergraduate and graduate education as well as leadership and civic engagement.

ASPSA is committed to extending the educational experience of its constituency with particular emphasis on empowering student-athletes to become strong self advocates, providing specialized initiatives to facilitate a smooth transition from high school to college and from college to professional life while successfully integrating student-athletes into the campus community; enhancing academic skills for student-athletes at all skill levels and providing academic support personalized to the needs of each student-athlete.

ASPSA will maintain a strong sense of integrity and will continue to strive to be one of the benchmark programs for academic support for all collegiate academic support programs in the nation.

The mission of the Office of Academic Support Program for Student Athletes at NC State University is:

1. to support the recruitment, retention and graduation of NC State student-athletes;
2. to provide a comprehensive support system that affords NC State student-athletes equitable opportunity to pursue academic, personal, and professional development and
3. to strongly adhere to the principles of integrity, excellence, and lifelong learning.

Summer START (https://summerstart.dasa.ncsu.edu)

204 Park Shops
NC State Box 7105
Raleigh, NC 27695-7105
Website: http://summerstart.dasa.ncsu.edu
Phone: 919-513-1883

Ginny Shepherd, Summer START Coordinator

Summer START is designed to assist new incoming students with the transition to NC State University through five weeks of academic courses and campus involvement. This program provides a strong introduction to the culture of NC State and to the city of Raleigh. Summer START is a small but diverse living and learning experience with students represented from 8 different countries, 11 different states and all 10 undergraduate colleges at NC State. Summer START works closely with each college to ensure students will be enrolled in academic courses towards their specific curriculum to get them on the accelerated path to graduation. In addition to up to eight credit hours of university coursework, many optional academic, recreational, service, leadership and involvement opportunities are planned throughout the week and weekends to help students acclimate to NC State’s campus. Co-curricular, college based, leadership, and service programs are planned throughout the week and on the weekends.

College Advising Corps (CAC) (http://advisingcorps.dasa.ncsu.edu)

211 Park Shops, NC State Box 7105
Raleigh, NC 27695-7105
Website: http://advisingcorps.dasa.ncsu.edu/
Phone: 919-515-5247, Fax: 919-515-4416

Patti Baynes, Program Manager

In 2014, the College Advising Corps launched a partnership with the John M. Belk Endowment to expand to partner institutions in North Carolina. With over 685,000 rural students, North Carolina has one of the highest concentrations of rural students in the nation. With significant need to increase college access for high school students in rural North Carolina and the substantial impact the Advising Corps had already demonstrated in rural North Carolina, the partnership with the Belk Endowment allowed the Advising Corps to partner with four of North Carolina’s top Higher Education institutions.

“The NC State College Advising Corp is extending educational opportunities to all students.”

The NC State College Advising Corps was launched the summer of 2014, starting with nine advisors serving nine high schools. The program, with 21 advisors, now serves over 14,000 students in 21 high schools, spanning across 10 different rural counties in North Carolina. As recent graduates of NC State, the advisors are placed in under-served, rural high schools to assist students who may not have seen college as a possibility. They are often the key resources for students to persist in their education beyond high school and become mentors within the school setting. Further, the NC State College Advisors serves as a role model for service and an expressive voice of the importance of an educated workforce.

Disability Services Office (DSO)

2221 Student Health Center
NC State Box 7509
Raleigh, NC 27695-7509
Website: http://dso.dasa.ncsu.edu
Phone: 919-515-7653

Mark Newmiller, Director

The Disability Services Office (DSO) collaborates with students to determine reasonable accommodations to ensure equal opportunity. The DSO works with departments throughout the University to assure that the programs and facilities are accessible to every student at NC State.

NC State is committed to providing all students with equal access to educational programs, services and activities. Students who have, or think they may have, a disability (e.g. mental health, attentional, learning, vision, hearing, physical or systemic) are invited to contact the DSO (http://dso.dasa.ncsu.edu/contact-us) to arrange a confidential discussion at 919-515-7653 or disability@ncsu.edu.

EcoVillage (https://dasa.ncsu.edu/tag/ecovillage)

116A Bragaw Residence Hall
NC State Box 7105
Raleigh, NC 27695-7105
Website: https://dasa.ncsu.edu/tag/ecovillage/
The EcoVillage, located in Bragaw Hall welcomes students from all majors, thereby creating an interdisciplinary education experience that prepares students for life-long sustainable living! Students go beyond the classroom to lead, serve, create, problem-solve and engage in complex issues facing the local and global energy and environmental challenges of society to advance sustainability.

The EcoVillage focuses on uniting students around the central goal of sustainable living and awareness. The EcoVillage broadly defines sustainability to include everything from agriculture and energy consumption, to transportation and recycling.

The EcoVillage provides unique experience allowing students to face the energy and environmental challenges of society. Beyond the classroom, members of the EcoVillage engage with faculty, facilities staff and sustainability staff to explore local, regional and global approaches to advance sustainability.

**Exploratory Studies**

2751 Cates Avenue  
University College Commons  
NC State Box 7925  
Raleigh, NC 27695-7925  
Website: https://exploratorystudies.dasa.ncsu.edu  
Phone: 919-515-8130 Fax: 919-515-8267

Kim Outing, Director  
Carrie McLean, Assistant Dean and Executive Director of Advising

Exploratory Studies provides a comprehensive first year experience for students who want to learn about NC State’s many academic programs, choose the right major, and graduate on time. Established in 1995 as the First Year College, the program has developed a nationally-recognized model for successfully working with exploratory students. The key components of the program include personal, one-on-one academic and career advising, a two-semester orientation course and the Exploratory Studies Village.

Cross-curricula, developmental advising is the hallmark of Exploratory Studies and the reason why Exploratory Studies students can take a year to explore majors without extending their time to degree completion.

Exploratory Studies students meet with their advisor at least twice each semester for one-on-one advising, and they also see their advisor weekly in the required Exploratory Studies orientation course, which meets weekly in the fall and spring semesters. This class offers an introduction to University programs, resources, opportunities, and policies and provides a space for structured exploration of self, majors, and careers. The Exploratory Studies Village offers residents additional opportunities in support of the program goals, upper class Exploratory Studies Resident Mentors, and an active, vibrant community of first year students. Exploratory Studies students may also take advantage of free tutoring offered by the program, leadership opportunities, and special sections of general education courses that are linked with select sections of the Exploratory Studies course.

**Fellowship Advising Office** (https://fellowships.dasa.ncsu.edu)  
204 Clark Hall  
NC State Box 8610  
Raleigh, NC 27695-8610

The Fellowship Advising Office (FAO) provides a variety of services to NC State students and alumni. Some of these services include:

- Providing information on fellowship opportunities and application procedures
- Reviewing and critiquing application essays and statements
- Providing institutional endorsements for applicants who receive the campus nomination (for those fellowships that require nominations)
- Submitting application materials on behalf of applicants
- Staging mock interviews for applicants selected for regional interviews

The FAO Advisor works with students interested in applying for these and many other prestigious national fellowships. We encourage you to search our website for fellowship opportunities. Once you have identified fellowships that interest you, please make an appointment to discuss these opportunities with the Fellowship Advisor.

**First Year Inquiry Program** (http://www.ncsu.edu/firstyearinquiry) (FYI)

300 Park Shops  
NC State Box 7105  
Raleigh, NC 27695-7105  
Website: (http://ncsu.edu/firstyearinquiry) (http://www.ncsu.edu/firstyearinquiry)https://fyi.dasa.ncsu.edu/  
Phone: 919-515-3037 Fax: 919-515-4416

Barbara Kirby, Associate Vice Provost  
The First Year Inquiry Program (FYI) is designed specifically for first year students who take general education courses during their first year at NC State. Each FYI course, which is designated with the “Q” suffix, fulfills a general education program (GEP) requirement. FYI faculty, for whom teaching and student success are priorities, engage FYI students through the use of “inquiry-guided” teaching methods. The three student-learning objectives to which the FYI program strives are sharpening of critical and creative thinking skills, enhancing development of intellectual maturity and increasing student responsibility for his or her own learning. Students further benefit from experiencing classes with a small faculty/student ratio that fosters a closer relationship among students and professor.

**Global Perspectives Certificate (GPC)** (http://GPC.dasa.ncsu.edu)

300 Park Shops  
NC State Box 7105  
Raleigh, NC 27695-7105  
Website: http://gpc.dasa.ncsu.edu/  
Phone: 919-515-3037 Fax: 919-515-4416

Barbara Kirby, Associate Vice Provost  
As society, political systems, and economies become interrelated global systems, the need for global awareness is increasingly important. Students, regardless of academic and social background, need international awareness and experience to be successful members in our global society. Many businesses, graduate schools, and organizations give priority to applicants who have significant international and foreign language experience. Knowledge of global cultures is also personally...
fulfilling, giving way to new perspectives, international contacts, and even lifelong friends. The goal of the Global Perspectives Certificate is to:

- recognize students for their international studies and activities and
- encourage students to continue their global interests both overseas and within the United States.

All undergraduate degree-seeking students and all majors are welcome, including undergraduate international students. Upon completion, students will receive an official certificate and a notation on their transcript documenting their global experiences during their studies. Learn more about the GPC and get started today.

Health and Exercise Studies (HES)

2000 Carmichael Gymnasium
NC State Box 8111
Raleigh, NC 27695-8111
Phone: 919-513-3885  Fax: 919-515-1234
Website:  https://hes.dasa.ncsu.edu/

Tommy Holden, Department Head and Teaching Professor

All North Carolina State University students are required to complete two credit hours of Health and Exercise Studies (HES) activity courses to meet the University General Education Program (GEP). Students must take at least one credit hour of a 100-level Health and Exercise Studies course. 100-level activity courses focus on fitness and wellness and can be found with the HESF prefix. The second credit hour required to fulfill the GEP can be an additional 100-level Health and Exercise Studies activity course or a 200-level activity course, which focuses on skill-acquisition. Students may choose a class that offers a familiar skill, or may opt to experience a new activity. Students with disabling conditions will be assisted by the department of Health and Exercise Studies, Student Health Service, and the Disability Services Office to help choose appropriate classes. Only “activity” courses, not elective “lecture” courses, may be used to satisfy the NC State GEP HES requirement. Students have the option of taking HES courses on an S/U basis. For more information, please visit Health and Exercise Studies website.

Music Department

Price Music Center
2620 Cates Ave
Raleigh, NC 27695
Phone: 919-515-2981 – Main Office
Phone: 919-515-4204
Fax: 919-515-1089

Broughton Hall
2601 Katharine Stinson Dr.
Campus Box 7311
Raleigh, NC 27695
Phone: 919-515-1064 – Main Office
Fax: 919-515-1089
Website:  https://music.dasa.ncsu.edu/

Daniel Monek, Department Head

The Music Department provides educational and performance opportunities for student and community participants through a variety of musical experiences and academic courses. The department also serves as a cultural resource for the University and the greater community through performances and presentations offered by our students, our student/community groups, and by our faculty.

The Music Department provides a responsive and innovative music education to all NC State students as an essential expression of the human experience.

New Student Programs (NSP) (https://newstudents.dasa.ncsu.edu)
106 Peele Hall
NC State Box 7105
Raleigh, NC 27695-7105
Phone: 919-515-1234
Website:  https://newstudents.dasa.ncsu.edu/

Michael Coombes, Director

Our Mission: New Student Programs addresses the holistic needs of each new NC State student to create a foundation of success.

Based on the core value that people matter, we achieve this through:

- Cultivating strategic partnerships across the University
- Promoting an environment of personal responsibility
- Fostering inclusivity through a shared campus identity
- Partnering with parents and families
- Preparing and empowering student leaders to serve the campus
- Striving to be innovative in meeting the needs of our community

Our Outcomes: By participating in our programs, students should achieve the outcomes identified below.

- Objective 1: Academic Success
  Outcome 1a: Identify skills, university and college resources, and policies that promote academic success and engagement in co-curricular learning experiences
- Objective 2: Connection to Campus
  Outcome 2a: Develop a sense of community with fellow students, faculty and staff by engaging in shared experiences
  Outcome 2b: Recognize the value of the different experiences of individuals within the campus community
- Objective 3: Community Expectations
  Outcome 3a: Examine the role of personal responsibility as it applies to the university’s academic and behavioral expectations and policies
  Outcome 3b: Identify behaviors and resources that promote personal and community well-being and safety
- Objective 4: Transition to the University Environment
  Outcome 4a: Demonstrate the ability to navigate the day-to-day functions of collegiate life by utilizing the available resources
- Objective 5: Student Leader Development
  Outcome 5a: Apply effective leadership skills in interactions with students, families, New Student Programs staff, and campus partners
  Outcome 5b: Utilize knowledge of campus to address the transitional needs of new students and families

ROTC - Department of Aerospace Studies - Air Force (https://airforce.dasa.ncsu.edu)
3223 Broughton Hall
NC State Box 7308
Raleigh, NC 27695-7308
Phone: 919-515-2417
Fax: 919-515-4456
Lieutenant Colonel Jeffrey Onan
Commander and Department Chair

Our faculty of professors are active duty officers from diverse professional backgrounds that enrich the learning environment.

The AFROTC program at NC State University is geared toward students who desire to earn a commission as a Second Lieutenant in the U.S. Air Force. However, any NC State student or one of our four crosstown colleges who wish to learn about the U.S. Air Force (USAF) can take any Air Force ROTC course with no obligation or commitment. All students who complete the Aerospace Studies academic program of study with a minimum of 15 hours in aerospace studies are eligible to receive a Aerospace Studies minor.

The four-year AFROTC program that leads to a commission as a U.S. Air Force Officer allows freshmen to enroll in Aerospace Studies courses in the same manner as other college courses for the first two years. It is during this time a student may join the program and become an Air Force ROTC cadet. All cadets must be attending college in “full time” status. Aerospace Studies courses are taken as free electives and cadets incur no military obligation unless they are receiving an AFROTC scholarship. The first two years in the AFROTC program are called the General Military Course (GMC) during which cadets learn the basics of military discipline, followership, and begin preparation for field training. The last two years of AFROTC comprise the Professional Officer Course (POC) where cadets lead each other through a time-tested leadership laboratory training environment that instills both character and leadership skills needed in preparation for life as an active duty officer. The pinnacle training event for AFROTC occurs in the summer between the sophomore (AS200) and junior (AS300) year when a cadet attends intense field training held at Maxwell AFB, Alabama and Camp Shelby, Mississippi.

For exceptionally qualified cadets, the four-year program can be compressed to as little as two and one half years for those who do not complete all four AS100 and AS 200-level courses (AS 121 The Foundation of the United States Air Force I and AS 221 The Evolution of USAF Air and Space Power I are offered in the fall semester, AS 122 The Foundations of the United States Air Force II and AS 222 The Evolution of USAF Air and Space Power II are offered in the spring semester) while enrolled in the Air Force ROTC program. Interested students must contact the Professor of Aerospace Studies to determine eligibility requirements.

Cadets at every level have numerous opportunities to further their knowledge of the Air Force and develop leadership. Throughout the school year, cadets have opportunities to examine all aspects of life in the Air Force and gain leadership experience through Air Force base visits, flying opportunities, and social activities. Additionally, a variety of summer programs allow cadets to visit bases and participate in programs such as the US Air Force Academy Free Fall program, manned glider training, and worldwide cultural immersion programs. POC cadets have similar opportunities, with focus on programs related to the cadet’s desired active duty career area, both in the U.S. and abroad.

Upon university graduation and satisfactory completion of the Air Force ROTC program, a cadet is commissioned a second lieutenant in the USAF and is obligated to serve a minimum of four years on active duty. View the NC State Air Force ROTC website (https://airforce.dasa.ncsu.edu).

ROTC - Department of Military Science - Army (https://army.dasa.ncsu.edu)
1216 Broughton Hall
NC State Box 7309
Raleigh, NC 27695-7309
Phone: 919-513-0189
Fax: 919-515-2070
Website: https://army.dasa.ncsu.edu/

MAJ Timothy Hudson

The mission of the Army ROTC Program is to train college men and women to become commissioned officers in sufficient numbers to meet Active Army, Army Reserve, and National Guard requirements. The Army ROTC Program consists of a voluntary Basic Course (freshmen and sophomore level) and a two-year Advanced Course (junior and senior level) that includes a four-week Cadet Leaders Course in the summer prior to the senior year. One may enter the Advanced Course with participating in the Basic Course by any of the following methods: Simultaneous Membership Program (SMP): Members of the Reserve or National Guard units may take advantage of this program and, if accepted, enroll directly into the Advanced Course. SMP participants will be assigned to a unit near NC State or home for part-time monthly officer training and will receive the ROTC Advanced Course subsistence payment of $450 per month for juniors and $500 per month for seniors, plus approximately $200 per month for the one weekend of Reserve or Guard training. In addition, two weeks of Annual Training will be required for which the individual will receive full pay; Prior Service: Service veterans are eligible for placement into the Advanced Course; Leader's Training Course (LTC): Successful completion of the four-week basic summer camp, held at Ft. Knox, Kentucky is an alternative to the Basic Course. Students with strong academic credentials may receive a scholarship after completing this course; Transfer Credit: Students entering as transfer students from other institutions may receive credit for work completed at other Senior ROTC units; Junior ROTC: Students who participated in a Junior ROTC in high school may receive placement credit as determined by the Professor of Military Science.

All full-time freshmen and sophomores may enroll in any Military Science Basic Course offering without obligation to the Army. To be eligible for participation in the Advanced Course, applicants must be in good academic standing and demonstrate satisfactory performance in the Basic Course. Additionally, applicants for commissioning must be able to be commissioned by their 30th birthday. An age waiver may be obtained as long as the individual will be commissioned prior to his/her 32nd birthday. A student must have a minimum of two years remaining as a full-time student at either the undergraduate or graduate level.

ROTC - Department of Military Science - Navy
4174 Broughton Hall
NC State Box #7310
Raleigh, NC 27695-7310
Phone: 919-515-2757
Fax: 919-515-6215
Website: https://naval.dasa.ncsu.edu/

CAPT Stephen Gillespie, USN
Professor of Naval Science

The purpose of the department of Naval Science is to develop midshipmen and enlisted officer candidates mentally, morally, and physically and to imbue them with the highest ideals of duty, honor, and loyalty in order to commission college graduates as Navy and
Marine officers who possess a basic professional background, are motivated toward careers in the naval services, and have a potential for future development in mind and character so as to assume the highest responsibilities of command, citizenship, and government.

There are two NROTC programs leading to a commission as a Navy or Marine Officer upon graduation: The Scholarship Program and the College Program.

The Scholarship Program leads to a commission in the Navy or Marine Corps. For students who receive a Navy/Marine Corps scholarship, the Navy will pay tuition and fees, provide a $375 book allowance each semester, supply uniforms, and pay a monthly tax-free subsistence allowance (currently $250 to $400 on a graduated scale; refer to the NROTC website (https://naval.dasa.ncsu.edu) for updates), to help defray the cost of normal board at the University. During the summers between school years, Navy scholarship students receive approximately 4 weeks of at-sea training conducted on ships, submarines, or aviation squadrons. For select students, training with mobile Explosive Ordinance Disposal (EOD)/SEAL teams is also possible during the summer prior to their senior year. Marine scholarship students participate in a Mountain Warfare Training course between sophomore and junior year and complete Marine Officer Candidate School between their junior and senior year. The minimum active duty obligation following graduation for scholarship students is five years but can vary greatly depending on the warfare community a student commissions into.

For those students who are interested in a commission and do not desire a scholarship, or for those who are seeking an opportunity to qualify for a scholarship after entering NC State, the College Program is available. Selection for the College Program is made from students already enrolled at NC State with applications being accepted and considered by the staff of the NROTC unit. Students enrolled in the College Program are provided uniforms and Naval Science textbooks. College Program students compete for selection to continue NROTC as “Advanced Standing” students at the end of their sophomore year. Selection is based on academic and demonstrated professional performance. Those selected for Advanced Standing receive a monthly subsistence allowance during the final two years of the program (refer to the NROTC website (https://naval.dasa.ncsu.edu) for amounts). College Program midshipmen participate in a single summer training cruise between the junior and senior year. Except for administrative differences, no distinction is made between Scholarship and College Program midshipmen. The minimum active duty commitment following graduation for College Program students is three years but can vary based on the warfare community a student commissions into.

Students in the College Program are eligible to compete for merit based scholarships annually. If selected for a merit based scholarship, the student would begin their next academic year on a full scholarship, identical to the Scholarship Program description above.

The Two-Year Scholarship Program offers an opportunity to participate in NROTC in the final two years of University study. This program is offered only intermittently by the Navy and may or may not be available during any given year.

Applications for this program must be completed by early Spring prior to the starting year. Upon selection, the candidate attends a six-week training course at Newport, Rhode Island, during the summer between the sophomore and junior years so that he or she may receive instruction in the Naval Science subjects normally covered in the first two years at NC State. Participants in this training course receive uniforms, room and board, and officer candidate pay during the summer period and, upon satisfactory completion of training, enter the NROTC program as third year students. The application process can be time consuming. In order to meet the Spring deadline, students are encouraged to contact the Department of Naval Science before December 1 of their sophomore year.

Graduates of the Navy program are commissioned as Ensigns and are selected to serve in one of the Navy’s front line warfare communities (Surface Warfare, Submarine/Nuclear Power, Pilot, Naval Flight Officer, Special Operations/EOD, or Special Warfare/SEAL). Graduates of the Marine program are commissioned as Second Lieutenants and attend the Marine Officer Basic School at Quantico, Virginia where they select their Military Occupational Specialty (MOS).

In addition to the courses taken for University credit, midshipmen attend leadership laboratory and physical training each week. At the completion of the four-year period students will have earned enough credit to apply for a minor in Naval Science.

Further information regarding application for and admission into the NC State Naval ROTC may be obtained on campus in Room 4165 Broughton Hall, by writing to the Professor of Naval Science, Campus Box 7310, NC State, Raleigh, North Carolina 27695-7310 or by contacting the unit recruiting officer, LT Anthony Scalabrino at 919-515-6218 or via E-mail at atscalab@ncsu.edu.

TRIO Programs

20 Enterprise Street, Suite 2
NC State Box 7317
Raleigh, NC 27695-7317
Phone: 919-515-4577, Fax: 919-515-4581
Website: http://trio.dasa.ncsu.edu

Marsha Pharr, Executive Director

The TRIO Programs are Federal outreach and student services programs designed to serve under resourced individuals, first-generation college students, and individuals with disabilities to progress through the academic pipeline from middle school to post baccalaureate programs.

The Talent Search and Upward Bound Programs serve pre-college level students. Talent Search serves grades 6-12 and Upward Bound serves 9-12 while the Student Support Services and the Student Support Services STEM Programs support enrolled undergraduate NC State University students. These programs utilize a holistic approach in providing academic tutoring, personal counseling, mentoring, financial guidance, and other support services necessary for educational access, persistence and degree completion.

Student Support Programs (SSS & SSS-STEM) (http://trio.dasa.ncsu.edu/student-support-services)
NC State Box 7105
Raleigh, NC 27695-7105
Website: http://trio.dasa.ncsu.edu/student-support-services
Phone: 919-513-7774

Courtney Simpson, Director

NC State University TRIO Student Support Services (SSS) Program and Student Support Services STEM (SSS-STEM) strive to encourage and enhance educational opportunities for undergraduate students by providing academic and personal support to enhance academic skills, increase retention and graduation rates, and as appropriate, facilitate
entrance into graduate and professional programs. TRIO SSS and SSS-STEM provide opportunities for academic and personal development by assisting students with college requirements, motivating students toward the successful completion of their post-secondary education and promoting graduate school enrollment through individualized coaching and tutoring at no cost to the student. The TRIO SSS and SSS-STEM Programs serve 260 students annually.

Undergraduate Courses and Curricula and Academic Standards

211A Park Shops
NC State Box 7105
Raleigh, NC 27695-7105
Website: http://oucc.ncsu.edu
Phone: 919-515-9769 Fax: 919-515-4416

Li Marcus, Director

The Office of Undergraduate Courses and Curricula and Academic Standards manages the implementation of the General Education Program (GEP) and the approval of all undergraduate course and curricula offerings at NC State. The office also maintains related guidelines, instructions, forms, and archives. The office serves as a point of contact for on-campus as well as off-campus entities and works directly with the University of North Carolina General Administration (UNC-GA), the University Courses and Curricula Committee (UCCC), the Council on Undergraduate Education (CUE), Registration and Records, the Colleges, and the Office of the Provost regarding undergraduate course and curricula related matters.


211T Park Shops
NC State Box 7576
Raleigh, NC 27695-7576
Website: http://undergradresearch.dasa.ncsu.edu
Phone: 919-513-0095 Fax: 919-513-7542

Chris Ashwell, Director

The office of Undergraduate Research supports and promotes excellent undergraduate opportunities in discovery-, inquiry- and creativity-based scholarship through mentored research experiences with NC State faculty and other national and international scholars and professionals. Undergraduate Research is scholarly study in any discipline in which independent scholarship culminates in advancements in science, technology, engineering, business, the arts, or humanities. Any student chosen by a mentor may participate in undergraduate research. Students from any discipline can engage in the excitement of scholarly research and present their work at quarterly symposia. Research and travel grants are available.

University Honors Program (http://www.ncsu.edu/honors) (UHP) (http://honors.dasa.ncsu.edu)

219 Clark Hall
NC State Box 8610
Raleigh, NC 27695-8610
Website: https://honors.dasa.ncsu.edu/
Phone: 919-513-4078 Fax: 919-513-4392

Sue Carson, Interim Executive Director

The University Honors Program (UHP) is a highly selective academic program that seeks to provide a transformative liberal learning experience which empowers students to critically engage meaningful problems in the world. Students in the program directly participate in knowledge-building and creative activities of the NC State faculty and are encouraged and enabled to craft for themselves a unique undergraduate education that draws on the full range of opportunities that exist at a major research, land-grant university such as NC State.

Application to the University Honors Program is by invitation only. Incoming freshmen are invited to apply after they have been accepted to the University. All invitations are issued on a rolling basis throughout the University’s admissions process (typically mid-December through February). If you do not receive an invitation, but believe you are a strong candidate for the University Honors Program, you can contact the UHP office and request an invitation to apply. Admission is competitive and based on evidence of motivation to pursue research and scholarship in the discipline, academic achievement, extracurricular activities, and our desire to maintain an Honors community that includes students from a diversity of academic disciplines. Current NC State students may also request an invitation to apply.

The curricular core of the UHP is the HON seminars, which are small, intensive, graduate-style, interdisciplinary courses designed to expose students to how multiple disciplines approach and try to solve problems. University Honors Program students are required to take a minimum of 12 credit hours of HON seminars (generally one per semester in their first two years). These seminars are taught by some of the most innovative professors at NC State. The UHP also offers experiential learning courses that enable them to earn credit for activities such as working with a faculty member on a project or with a local museum to create educational materials for a new exhibit. The other major curricular
our program objectives:

This mission provides the foundation for experiences empower them to be informed citizens, ethical leaders, and to connect their academic and personal goals, and through these issues drawn from the sciences and politics, to offer them opportunities students to the visual and performing arts, to encourage them to consider North Carolina State University embraces this challenge: To introduce Huxley was right, and the University Scholars Program (USP) of "The great end of Life is not knowledge – but action." Thomas Huxley. They have been emboldened by a willingness to take personal risks in order to explore the secrets of the unknown. They have stretched the dimensions of our frontiers in ways that are extraordinary... and the exploration to uncover the truths of the universe, both great and small, continues. The University Scholars Program invites talented, creative, curious students to join us at NC State for a fun and exciting adventure that will lead to a lifetime of knowledge in action.

"The great end of Life is not knowledge – but action." Thomas Huxley.

Huxley was right, and the University Scholars Program (USP) of North Carolina State University embraces this challenge: To introduce students to the visual and performing arts, to encourage them to consider issues drawn from the sciences and politics, to offer them opportunities to connect their academic and personal goals, and through these experiences empower them to be informed citizens, ethical leaders, and active contributors to our society. This mission provides the foundation for our program objectives:

• Promote the personal, intellectual, and cultural development of University Scholars.

• Foster community and promote student learning, reflection, and service.

• Promote an inclusive environment by supporting a diversity of people, cultures, and perspectives.

• Encourage students to discuss and debate social and political issues to help them become informed citizens, ethical leaders, and active contributors to our society.

• Encourage students to develop a commitment to civil and thoughtful discourse which respects divergent views and diverse experiences, seeks multiple and competing sources of information when analyzing complex issues, and values the ability to articulate a viewpoint with evidence and clarity.

• Provide University Scholars with opportunities for leadership and professional development.

• Encourage academic excellence and a commitment to advanced and independent academic inquiry among University Scholars.
as easily and efficiently as possible. A Schedule of Courses for each semester is also available online prior to the beginning of the enrollment period.

Enrollment consists of three steps:

1. Students meet with advisors to determine course requirements and to have their Advising Hold released;
2. Students enroll in courses using the MyPack Portal system; and
3. Students pay tuition, fees, and all other debts to the university by the established deadlines. Advising and general enrollment start dates and deadlines are published on the web each semester. Students must check the specific day and time they will access Enrollment in the Enrollment Dates menu of MyPack Portal.

For more information, contact:
Department of Registration and Records (http://registrar.ncsu.edu)
1000 Harris Hall
Box 7313,
NC State University
Raleigh, NC 27695
phone: (919) 515-2572
fax: (919) 515-2376
For questions, please visit the Registration and Records FAQ (https://nccs.service-now.com/studentservices).

Exchange Programs
Several enrollment programs exist for the purpose of fostering cooperative educational activities. Under these programs students have the opportunity to register for courses at other institutions and to participate in cooperative library arrangements and joint student activities.

Inter-Institutional Program
The Inter-Institutional Registration Program is a voluntary organization comprised of NC State, Meredith College, St. Augustine’s College, Wake Technical Community College, and William Peace University for the purpose of developing and conducting cooperative educational activities within the Raleigh area. The course taken at the visited school must be a course that is accepted for their program of study and not offered through NC State. Interested students should contact the Inter-Institutional Coordinator at (919) 515-1427 or visit the Cooperative Raleigh Colleges website (https://studentservices.ncsu.edu/your-classes/exchange-programs/cooperating-raleigh-colleges).

Veterans Affairs and Benefits
NC State University is approved to administer veterans benefits to eligible students. The Veterans Affairs and Benefits office is located in Registration and Records, 1000 Harris Hall. Students who are eligible to receive veterans benefits should contact the NC State Certifying Official at (919) 515-3048 or veterans-ed@ncsu.edu (veterans-ed@ncsu.edu) For more information see the NC State Veterans Education website (http://registrar.ncsu.edu/veterans).

Schedule Revision (drops and adds)
Note: NC State University policies, rules and regulations are updated and reviewed as the need arises. For the most current information regarding this section, please visit the Policies, Rules, and Regulations website (http://policies.ncsu.edu/regulation/reg-02-20-02).

Courses may be added during the first week of a regular semester without permission of the instructor and during the second week with the permission of the instructor. For specific deadlines, visit the calendar page on the Student Services Center website. (https://studentservices.ncsu.edu/calendars/academic)

Courses may be dropped without regard to course load during the first two weeks (prior to census date) of a regular semester. During weeks three through six (prior to the drop/revision deadline), full-time undergraduate students who wish to drop courses at any level and whose academic load would thereby fall below the twelve hour minimum course load may do so only for documented medical reasons or other verified, unforeseen grounds of personal or family hardship.

Exceptions to the drop policies require the recommendation of a student’s advisor, the departmental coordinator of advising or the departmental head, and approval by the student’s dean.

Students who wish to drop all courses must withdraw from the university for the remainder of the semester or summer session in which they are enrolled. All withdrawals for a current or upcoming term are initiated through the self-service Term Withdrawal page in the MyPack Portal: Student Self Service > Enrollment > Term Withdrawal.

Withdrawals after the drop/revision deadline are approved by the university only under extenuating circumstances. Documentation is required to support these requests.
Honors and Scholars Programs

University Honors Program (https://honors.dasa.ncsu.edu)

The University Honors Program (UHP) is a highly selective academic program that seeks to provide a transformative liberal learning experience which empowers students to critically engage meaningful problems in the world. Students in the program directly participate in the knowledge-building and creative activities of the NC State faculty and are encouraged and enabled to craft for themselves a unique undergraduate education that draws on the full range of opportunities that exist at a major research, land-grant university such as NC State.

University Honors Program Admission

Application to the University Honors Program is by invitation. Incoming freshmen are invited to apply after they have been accepted to the University. All invitations are issued on a rolling basis throughout the University’s admissions process (typically mid-December through February). If you do not receive an invitation, but believe you are a strong candidate for the University Honors Program, you can contact the program and request an invitation to apply. Admission is competitive and based on evidence of motivation to pursue research and scholarship in the discipline, academic achievement, extracurricular activities, and our desire to maintain an Honors community that includes students from a diversity of academic disciplines. Current freshmen may also request an invitation to apply.

University Honors Program Requirements

The curricular core of the UHP is the HON seminars, which are small, thought-intensive, graduate-style, interdisciplinary courses designed to expose students to how multiple disciplines approach and try to solve problems. University Honors Program students are required to take a minimum of 12 credit hours of HON seminars (generally one per semester in their first two years). These seminars are taught by some of the most innovative professors at NC State. The UHP also offers experiential learning courses that enable them to earn credit for activities such as working with a faculty member on a project or with a local museum to create educational materials for a new exhibit. The other major curricular dimension of the UHP is the Capstone project, which is a 6-credit-hour, 2 semester long independent research project, conducted under the guidance of a faculty mentor. The Capstone is the culmination of a student’s NC State and University Honors Program experience because it is the process through which students truly move from being knowledge consumers to knowledge producers. The Capstone requires that a student articulate a problem or issue of interest and then use the tools and methods of their discipline in order to make a new discovery.

The Honors Village

The Honors Village is a collaborative partnership between the University Honors Program and University Housing. The mission of the Honors Village is to create a community of young scholars which is engaged in the societal issues, provides opportunities for growth, and is grounded in critical scholarship. The Honors Village advances the UHP’s mission of engaged learning and research in the discipline through creating opportunities for students to become curious, informed, and critically-minded. The community boasts representation from all Colleges and all academic years (Freshman through Senior) and is home to NC State's longest standing Scholar in Residence Program. The Honors Village is located in the historic renovated Quad residence halls on East Campus.

In Addition

The Honors experience at NC State includes Honors programs located in the colleges and departments. Students are invited to participate in these programs at various times, depending upon the specific program (generally the second semester of the sophomore year or first semester of the junior year). Many of the students in the University Honors Program are also participants in one or more of the college or departmental Honors programs.

For more information about the UHP, contact:

University Honors Program, Division of Academic and Student Affairs
Campus Box 8610, Raleigh, NC 27695-8610
Phone: 919-513-4078 Fax: 919-513-4392
Email: university_honors@ncsu.edu or visit http://www.ncsu.edu/honors/

University Scholars Program (https://scholars.dasa.ncsu.edu)

“Twenty years from now you will be more disappointed by the things you didn’t do than by the ones you do. So throw off the bowlines, sail away from the safe harbor. Catch the trade winds in your sails. Explore. Dream. Discover.” --Mark Twain.

For thirty-five years, the USP has encouraged outstanding students to leave the safe harbor, to pursue their dreams, and to explore the beauty and the challenges of the world around them. How? Through opportunities to participate in the Scholars Forum, to enroll in special courses and to join the community of the Scholars Village.

SCHOLARS FORUM: University Scholars enroll in the Scholars Forum (https://scholars.dasa.ncsu.edu/forum) for three semesters. The Forum features musical and theatrical performances, addresses by major public figures, authors and scientists, and debates and discussions of significant public policy issues. Among our recent guests were:

- Grenoldo Frazier, an award-winning musician, actor and composer of the gospel musical Mama I Want to Sing.
- David Doubilet, the world’s leading underwater photographer who has published over 70 stories for National Geographic magazine.
- Shana Tucker, a “ChamberSoul” cellist, singer and songwriter whose music is a mix of pop, jazz and folk.
- Shane Harris, an award-winning journalist, national security expert and author of the critically-acclaimed book The Watchers.
- Lisa Jolley, a teacher of improv and Broadway performer who has starred in Hairspray.

The Scholars Forum also offers an extraordinary range of cultural, educational and outdoor opportunities, all provided free through the program. Take part in special tours of NC State’s Nuclear Reactor, the Duke Lemur Center, or Piedmont Biofuels; participate in canoeing and hiking trips; and attend local theatre, music and dance performances and museum exhibitions. Students choose what they wish to do, and the options are amazing!

SPECIAL COURSES: University Scholars have the opportunity to enroll in honors sections (https://scholars.dasa.ncsu.edu/current/approved-
The cost of receive financial aid (including loans, grants, and scholarships) for to a semester on campus at NC State. Students are eligible to tuition and fees keep the cost of a semester abroad comparable provide the most economical option for most students since standard Study Abroad is affordable at NC State. Semester exchange programs not delay graduation at NC State.

For all majors, with academic planning, study abroad does academic advisor to identify a time frame and outline a course plan for options recommended for their major (https://studyabroad.ncsu.edu/ for-students/first-steps/major-specific-resources) and work with their academic advisor to identify a time frame and outline a course plan for study abroad. For all majors, with academic planning, study abroad does not delay graduation at NC State.

OIS programs include: New International Student Orientation, Culture Corps, ISSERV service learning program, English Conversation Club, and many others. New international students are required to participate in New International Student Orientation. OIS also provides opportunities for U.S. students to get involved in the international community at NC State by inviting participation in various cross-cultural programs such as volunteering at the International Student Orientation and English Conversation Club.

OIS provides additional funding to about 1/3 of applicants receiving an award, plus many other financial resources are available in support of study abroad.

Applying for Study Abroad
With hundreds of opportunities to choose from—each differing in courses, duration, language, cost, location—early planning is key to a successful study abroad experience. Well prepared students typically start planning a year in advance.

Visit http://studyabroad.ncsu.edu to learn more.

Global Perspectives Certificate
The goal of the Global Perspectives Certificate is to:

- recognize students for their international studies and activities and
- encourage students to continue their global interests both overseas and within the United States.

All undergraduate degree-seeking students and all majors are welcome, including undergraduate international students. Upon completion, students will receive an official certificate and a notation on their transcript documenting their global experiences during their studies. Learn more about the GPC and get started today at gpc.dasa.ncsu.edu.

Cultural Exchange Network (CENet)
The Cultural Exchange Network at NC State is a student organization comprised of undergraduate and graduate students from all fields of study and from around the world. We foster global learning and international friendship through social, academic, and service activities. CENet is facilitated by the Global Training Initiative and details can be found on the website (go.ncsu.edu/CENet).

International Students
The Office of International Services (OIS) is charged with meeting the immigration advising and cross-cultural programming needs for the university’s more than 4000 international students and 700 J-1 Exchange Visitor scholars who come from more than 120 different countries. Services provided by OIS include advising students and scholars on immigration regulations and university policies; authorizing certain types of on or off-campus employment authorization for F-1 and J-1 visa holders; and providing cultural programs designed to enrich the cultural and academic experience of the campus community. OIS programs include: New International Student Orientation, Culture Corps, ISSERV service learning program, English Conversation Club, and many others. New international students are required to participate in New International Student Orientation. OIS also provides opportunities for U.S. students to get involved in the international community at NC State by inviting participation in various cross-cultural programs such as volunteering at the International Student Orientation and English Conversation Club.

International applicants must apply to the Admissions Office by the stated deadlines and must meet all the necessary requirements for admission. In addition, international applicants must meet certain language and financial criteria (see the TOEFL and Financial Information sections under Freshman Admission).

The North Carolina Global Training Initiative (GTI) sponsors several short-term certificate, internship, and research programs that international students may be interested in. These full-time non-degree study
programs allow international students to study at NC State for one semester in order to learn about U.S. culture and education, improve their conversational English, take undergraduate courses in their field of study back home or in preparation for admission to a degree program here in the U.S., and experience life in the U.S. These programs have a later application deadline and are great for students to take before enrolling in an undergraduate or graduate degree program in the US or for siblings and friends of current degree-seeking students who want to study in the US together.

International students may be interested in joining the GTI’s Cultural Exchange Network (CENet). CENet connects NC State’s domestic and international students through joint participation in social, academic, and service learning events and workshops. Visit the CENet website (go.ncsu.edu/CENet) for more details about the program and how you can apply.

Anyone interested in the GTI’s programs can visit us on the web at www.ncsu.edu/gti for more information.

Outline of minimum immigration requirements for F-1 and J-1 students:

- Keep passport and I-20 or DS-2019 current
- Maintain full-time enrollment every semester (12 hours/semester for undergraduates)
- Make good academic progress toward your degree
- Do not work or intern off campus without prior written approval from OIS
- Do not work on campus more than 20 hours in any one week during the semester
- Update any address change in MyPack Portal within ten days of moving
- Update OIS immediately of any changes in name, funding, or visa status
- Consult with an OIS advisor BEFORE changing curriculum/majors, withdrawing, dropping below full-time, transferring to another school/program, etc.
- Purchase and maintain the NC State University approved Health and Accident Insurance or other insurance plan that meets the published minimum coverage requirements.
- Keep your valid passport and recently signed visa certificate (I-20 or DS-2019) with you when you travel abroad. Consult with an OIS advisor about visa and travel questions

Further information about immigration requirements, employment and travel questions, cultural opportunities, and other critical information designed to assist international students are detailed on the OIS website. For individual advising, please call (919) 515-2961 to make an appointment with an advisor or stop by during our walk-in hours of 10:00am-11:45am and 1:00pm-2:45pm on Monday, Tuesday, Thursday and Friday (no walk-ins on Wednesdays).

Office of International Services (OIS)
320 Daniels Hall, 111 Lampe Drive
Campus Box 7222
NC State University
Raleigh, NC 27695-7222
Phone: (919) 515-2961
Email: ois@ncsu.edu
Website: http://internationalservices.ncsu.edu/

The Intensive English Program (Conditional Admission and IEP-only)

The Intensive English Program (IEP) at North Carolina State University is a full-time, non-credit academic program offered to international, non-native English speakers. Its mission is to provide high-quality language instruction to those seeking academic preparation, professional development and/or personal enrichment. Programs of study are offered in the fall, spring, and summer semesters.

In the IEP, students take up to 25 hours per week of intensive language study in all core language skills. Students who enroll in the IEP will be tested for the appropriate level of English instruction when they arrive on campus.

Classes are located on NC State’s main campus and nearby on Hillsborough Street. IEP students are also offered the opportunity to participate in numerous cultural enrichment activities designed to help them get to know the surrounding area and interact with other students. Academic coaching (tutoring) is offered to students free of charge.

Students join the IEP as conditionally admitted students or IEP-only students. While the course of instruction is identical for both, IEP-only students are not guaranteed admission to degree programs, but may apply directly to such programs while enrolled in the IEP.

Conditional Admission

For undergraduate applicants who meet the competitive academic requirements for admission, but who do not yet possess the minimum English proficiency requirements for full, direct admission, NC State offers conditional admission. For NC State conditionally admitted students, the IEP provides the opportunity to improve one’s English language skills before moving into a degree program.

Successful completion of the IEP requires achieving at least a B or higher in each course, meeting strict attendance obligations, and passing all exit requirements.

Intensive English Program
North Carolina State University
2526 Hillsborough Street, Suite 200
Raleigh, North Carolina USA 27607
Office hours: 8am-5pm, Monday-Friday
Phone: 919-515-4002
Email: iep@ncsu.edu
Website: http://iep.oi.a.ncsu.edu/

Summer Institute in English for Speakers of Other Languages

The Summer Institute in English (SIE) at North Carolina State University is an intensive English language program for students, business people, and professionals pursuing more advanced proficiency in English. It is especially beneficial to students from other countries who intend to pursue university studies or specialized training programs in the United States in the fall. The Institute, which is jointly sponsored by the Department of Foreign Languages and Literatures and the Division of Continuing Education, begins late June. Regarding the length of study, participants can choose between 3- and 5-week options. Students are provided with intensive communicative instruction and practice in all four skill areas. Their language learning experience is further enhanced.
with the addition of a variety of elective courses such as cultural topics/conversation, American English pronunciation, business English, reading and vocabulary development, and TOEFL preparation.

The Institute also offers orientation to American life and institutions to give students insight into U.S. culture and to help them to adjust to their new surroundings. Students take part in field trips to places of historic, cultural, and scenic interest. All levels from beginners to advanced are welcome. Students are placed into the appropriate level according to a proficiency placement test. Please note that admission to the Summer Institute in English does not imply admission as a degree candidate at NC State or any other campus of the University of North Carolina System.

North Carolina Japan Center
J.W. Baugh, Director

The NC Japan Center was established in July 1980 to strengthen the state’s academic, economic, scientific, and cultural ties with Japan. In its many aspects, the Center serves as a focal point for interaction between Japanese and North Carolinians. It is a statewide resource intended to assist all citizens, universities, companies, and public and private institutions in relations with the Japanese. The NC Japan Center works to inform people of the state about modern Japan and its people. It also provides information and resources for Japanese citizens living in North Carolina.

Consistent with NC State’s “Think and Do” land-grant mission, the NC Japan Center works in partnership with the North Carolina Department of Commerce to attract Japanese businesses to the state. An external Board of Advisors includes prominent citizens of North Carolina who have a strong interest in Japan and US-Japan relations. Its Academic Advisory Committee consists of faculty from colleges across the university who provide guidance and direction for academic exchange and development. The NC Japan Center cooperates closely with the NC State Japanese language program and provides study abroad scholarships for summer language study and full year exchange programs in Japan. For more information, please contact John Baugh at (919) 515-3450 or visit the North Carolina Japan Center's website (http://www.ncsu.edu/japan).

Confucius Institute
Anna Dunaway, Director

The Confucius Institute’s (CI) mission is to enhance intercultural understanding in the U.S. by supporting and organizing Chinese language and culture programs. NC State’s CI accomplishes this mission through a range of educational and outreach activities for students, teachers, businesses, and community members. The NC State CI helps to contribute to the support of Chinese language instruction at NC State and in North Carolina K-16 schools, offers enriching cultural opportunities for the community and helps organizations and businesses improve their international knowledge.

Details can be found on the website: https://confucius.oia.ncsu.edu.

Office for Institutional Equity and Diversity

The Office for Institutional Equity and Diversity (OIED) is committed to fostering an inclusive, accessible and diverse intellectual and cultural campus experience related to the mission of NC State University.

Diversity and Inclusion

The Diversity and Inclusion unit within the Office for Institutional Equity and Diversity provides leadership in the university’s efforts to coordinate, implement and facilitate educational programs, promote cultural competence and foster an understanding of and appreciation for diversity, equity and inclusion throughout the university community. Activities include providing diversity training, programs and consultation for the recruitment, retention and success of students, faculty and staff and reviewing and recommending changes to university policies, procedures and regulations to promote diversity and enhance inclusion.

Equal Opportunity and Equity

The Equal Opportunity and Equity unit of the Office for Institutional Equity and Diversity strives to make NC State University a discrimination-free, harassment-free environment for faculty, students and staff to work, live and learn. This unit is responsible for managing and monitoring the university’s equal opportunity compliance activities, overseeing the university’s equal opportunity policies, responding to complaints, conducting investigations, developing and delivering training and educational outreach to campus and consulting with supervisors, managers and unit equity officers regarding equal opportunity concerns and initiatives.

Bias Incident Response Team

The Bias Incident Response Team (BIRT) at NC State supports the campus community by providing a system through which a person can report incidents of bias on and around campus. BIRT seeks to effectively engage with impacted individuals and groups to achieve awareness, support, education and restoration. See the BIRT website at bias-incident.ncsu.edu.

Campus Community Centers

NC State’s Campus Community Centers report to the Office for Institutional Equity and Diversity (OIED). Collectively, the centers foster community; celebrate identity and culture; raise awareness; and support, empower and advocate for positive change for underrepresented and marginalized students, families and communities. They assist OIED in its goal of fostering an inclusive, accessible and diverse intellectual and cultural campus experience by creating spaces and activities that improve campus climate and enhance the overall educational experience for all students.

See Campus Community Centers under Student Services for information on the African American Cultural Center, GLBT Center, Multicultural Student Affairs and the Women’s Center, which report to the Office for Institutional Equity and Diversity.

Research Centers

In addition to offering more than 110 bachelor and master’s degrees in more than 110 areas of study, doctorate degrees in 61 disciplines, and a Doctorate of Veterinary Medicine, NC State also boasts more than 55 research centers and institutes. In conjunction with the colleges,
these research centers support a broad spectrum of more than 3,700 sponsored scholarly endeavors.

The Research Triangle Park

NC State is one of the three Triangle-area top-tier research universities along with Duke University in Durham and the University of North Carolina at Chapel Hill. Within the 30-mile triangle formed by the three universities is The Research Triangle Park, a 7,000-acre research park founded in 1959 by leaders from academia, business and government. Today, The Research Triangle Park is home to some of the most innovative and cutting-edge research based companies in the world.

The unique “Research Triangle” area of North Carolina has captured national and international attention. The “triangle” is formed by the three geographic points of Raleigh, Durham and Chapel Hill that are home to the area’s top-tier research universities: NC State, Duke University and University of North Carolina at Chapel Hill. Because of this wealth of educational and research opportunities, the triangle contains one of the highest concentrations of Ph.D. scientists and engineers per capita, in the nation. The highly educated workforce in the Triangle is extremely attractive to companies, many of which engage in collaborative programs within the area universities.

Since it was established, The Research Triangle Park has witnessed a steady and stable increase in the number of companies and employees. Currently, there more than 170 organizations located in The Research Triangle Park. More than 40,000 people work in the Park, with combined annual salaries of over $2.7 billion. Organizations in the Park include government research laboratories of the National Institute of Environmental Health Sciences, and the U.S. Environmental Protection Agency. Private companies such as IBM, GlaxoSmithKline, Nortel, Cisco, and RTI International are located in the Park. Talented scientists, engineers and managers from RTP companies frequently hold adjunct faculty appointments in one or another of the Triangle universities.

Advanced Self Powered Systems of Sensors and Technologies Center (ASSIST)

Dr. Veena Misra, Director

The mission of the Advanced Self Powered Systems of Sensors and Technologies Center (ASSIST) (https://assist.ncsu.edu) is to transform health informatics, electronics, and biomedical engineering; to develop nanotechnologies for energy harvesting, battery-free energy storage, and ultra-low-power computation/communication; to integrate low power physiological and environmental nano sensors using biocompatible materials; to empower personal environmental and health monitoring.

The Analytical Instrumentation Facility (AIF)

Jacob Jones, Director, Analytical Instrumentation Facility

The Analytical Instrumentation Facility (AIF) (http://www.aif.ncsu.edu) provides NC State faculty and students with the highest level of modern microanalysis instrumentation currently available as well as trained specialists to assist with teaching, training, instrument operation, and experimental design. The unique combination of extensive analytical instrumentation and specialized staff makes AIF a valuable asset to both teaching and research at all levels. AIF staff provides the expertise to access AIF’s state of the art analytical capabilities, conducts training and provide guidance to students. AIF is located in the Larry K. Monteith Engineering Research Center on the NC State Centennial Campus. This laboratory space, located in the mixed-use (private industry/academics) environment of Centennial Campus, provides the optimum environment for teaching, research and technology transfer. AIF analytical capabilities encompass analyses of materials including ceramics, metals, semiconductors, polymers, and biological materials. The Variable Pressure Scanning Electron Microscope (VPSEM), which can operate at high chamber pressure for charge neutralization, provides electron microscopy and EDS (Energy Dispersive X-Ray Spectroscopy) elemental analysis on uncoated non conductive samples including biological, polymeric, textile, and other materials. The VPSEM facility is used extensively by undergraduate students in a wide range of disciplines. AIF has extensive capabilities in the areas of Atomic Force Microscopy (AFM) for high resolution surface topography measurement, Field Emission Scanning Transmission Electron Microscopy (FE S/TEM) for atomic resolution imaging and chemical characterization, Dynamic Secondary Ion Mass Spectrometry (SIMS) for trace analysis, Time of Flight SIMS for spatially resolved molecular surface analysis, X-Ray and Ultraviolet Photoelectron Spectrometry (XPS, UPS) for chemical surface analysis, X-Ray Diffraction (XRD) for crystallographic analysis andFocused Ion Beam (FIB) nanomachining for sample preparation and fabrication of nanostructures and a metallography laboratory. In addition, AIF has extensive facilities for specimen preparation for all of the above mentioned analytical techniques.

Animal and Poultry Waste Management Center (APWMC)

Dr. Mike Williams, Director
Box 7608, 212 Scott Hall
Raleigh, NC 27695-7608
phone: (919) 513-0469
e-mail: mike_williams@ncsu.edu

The Animal and Poultry Waste Management Center (APWMC) (http://www.bae.ncsu.edu/topic/waste-mgmt-center) within the College of Agriculture and Life Sciences (CALS) at North Carolina State University (NCSU) was established in 1996. The APWMC provides infrastructure, programs, and assistance for innovative basic and applied approaches to animal waste management with emphasis on development of knowledge and waste management options contributing toward the enhancement of North Carolina’s and the nation’s animal production industries, as well as to the improvement of the environment and quality of life for all citizens.

Bioinformatics Research Center (BRC)

Dr. Fred Wright, Director

The mission of the Bioinformatics Research Center (BRC) (https://brc.ncsu.edu), under the College of Sciences, is to develop and implement methods for the management and interpretation of genomic data, with an emphasis on agriculture, forestry and veterinary medicine.

Center for Dielectrics and Piezoelectrics (CDP)

Dr. Elizabeth C. Dickey, Director

The Center for Dielectrics and Piezoelectrics (CDP) (http://www.mse.ncsu.edu/cdp), under the College of Engineering, aims to
develop an international leadership position in the fundamental material science and engineering that underpins dielectric and piezoelectric materials. Innovations in these areas often arise from research advances in materials chemistry, synthesis and processing that enable new materials and device functionality.

**Center for Educational Informatics (CEI)**

Dr. James Lester, Director

The mission of the North Carolina State University Center for Educational Informatics (CEI) (http://www.cei.ncsu.edu), under the College of Engineering, is to lead national efforts to design, develop, and deploy next-generation adaptive learning systems for K-12 education, post-secondary education, and training.

**Center for Environmental and Resource Economic Policy (CEnREP)**

Dr. Laura Taylor, Director

The mission of the Center for Environmental and Resource Economic Policy (CEnREP) (http://www.ncsu.edu/cenrep), housed under the College of Agriculture and Life Sciences, is to link economics to science, agriculture and technology to improve public understanding and enhance public and private management of environmental resources.

**Center for Family and Community Engagement (CFACE)**

Dr. Joan Pennell, Director

The Center For Family And Community Engagement (CFACE) (http://www.cfface.org), under the College of Humanities and Social Sciences, is dedicated to advancing safe, healthy, and productive families and communities. It promotes strategies that widen the circle of supports around families and communities. This is accomplished through emphasizing family leadership, community partnerships, cultural safety, and inclusive planning.

**Center for Geospatial Analytics (CGA)**

Dr. Ross Meentemeyer, Director

The mission of the Center for Geospatial Analytics (CGA) (http://geospatial.ncsu.edu), under the College of Natural Resources, is to promote graduate education and research in geospatial science and technology.

**Center for Human Health and the Environment (CHHE)**

Dr. Robert Smart, Director

The mission of CHHE (http://go.ncsu.edu/chhe) is to serve as the nexus of environmental health science research at NC State by providing focus and leadership for interdisciplinary research aimed at understanding how human health, at both the individual and population levels, is impacted by environmental factors and to utilize this understanding to reduce the adverse impacts of environmental factors on human health.

**Center for Innovation Management Studies (CIMS)**

Dr. Paul Mugge, Director

The Center for Innovation Management Studies (CIMS) (http://cims.ncsu.edu) exists to create, synthesize and disseminate industry-relevant information on innovation management and to develop current and future generations of innovation management researchers and industry practitioners.

**Center for Integrated Fungal Research (CIFR)**

Dr. Ignazio Carbone, Director

The Center for Integrated Fungal Research (CIFR) (http://cifr.ncsu.edu) provides leadership in research and educational objectives in the field of fungal parasitism and mycotoxins aimed to achieve significant breakthroughs in fungal research that will impact human welfare worldwide.

**Center for Integrated Pest Management (CIPM)**

Dr. Frank Louws, Director

The Center for Integrated Pest Management (CIPM) (https://ipm.ces.ncsu.edu/ipm) serves a lead role in technology development, program implementation, training, and public awareness for IPM at the state, regional, and national level.

**Center for Marine Sciences and Technology (CMAST)**

Dr. Dave Eggleston, Director

The principal mission of the Center for Marine Sciences and Technology (CMAST) (http://cmast.ncsu.edu) is to discover innovative solutions to questions and problems in marine systems and provide effective communication of these discoveries, by promoting multidisciplinary studies among research scientists, educators and extension specialists from the participating NC State University colleges, enhancing interaction with other educational institutions and agencies concerned with marine sciences and coastal natural resources, and providing a focal point for citizen contact with NC State University’s marine science and extension faculty.

**Center for Nuclear Energy Facilities and Structures (CNEFS)**

Dr. Abhinav Gupta, Director

The mission of the Center for Nuclear Energy Facilities and Structures (CNEFS) (http://www.ncsu.edu/ncsu/CIL/cnpps) is to perform research on innovative but rigorous solutions to problems in nuclear power plants and to transfer this technology to the industry.

**Center for Research in Scientific Computation (CRSC)**

Dr. Thomas Banks, Director
The Center for Research in Scientific Computation (CRSC) (http://www.ncsu.edu/crsc) is a formally recognized, multidisciplinary center of the greater University of North Carolina System. The CRSC is administered by NC State and the College of Physical and Mathematical Sciences. The purpose of the center is to promote research in applied scientific computation and to provide a focal point for research in modeling, computational methods, and applied mathematics. Data-massive and/or computationally intensive problems provide ideal projects for training undergraduate and graduate students in applied mathematics. With a wide range of computational methodologies, students and post doctoral fellows address important issues in applications involving model development and control design.

**Center for Research on Textile Protection and Comfort (TPACC)**

Dr. Roger Barket, Director

The Center for Research on Textile Protection and Comfort (TPACC) (https://textiles.ncsu.edu/tpacc) provides faculty and students with a coordinated environment where interdisciplinary problems related to textile comfort and protection performance can be studied and solved.

**Center for Turfgrass Environmental Research and Education (CENTERE)**

Dr. Thomas Rufty, Director

The Center for Turfgrass Environmental Research and Education (CENTERE) (http://www.turffiles.ncsu.edu) promotes research on the turfgrass systems and works on creating a multidisciplinary research ‘culture’ that develops new, environmentally sustainable management strategies. Emphasis is on basic research to resolve underlying processes that can lead to long-term solutions.

**Comparative Medicine Institute (CMI)**

Dr. Jorge, Piedrahita, Director

The mission of the Comparative Medicine Institute (CMI) (https://research.ncsu.edu/cmi) is to enhance collaborative, translational, interdisciplinary approaches for the comparative study of animal/human diseases.

**Ergonomics Center of North Carolina (The) (TECNC)**

Tim McGothlin, Director

The Ergonomics Center of North Carolina (TECNC) (http://www.theergonomicscenter.com) is a Public Service Membership Center specifically authorized by the North Carolina General Assembly and established in October 1994 with the original name North Carolina Ergonomics Resource Center through a partnership between North Carolina State University and the North Carolina Department of Labor (NCDOL), Division of Occupational Safety and Health (OSHNC) to assist employees and employers in the prevention of occupational musculoskeletal disorders (MSDs) and the optimization of human-machine work systems design from safety and performance perspectives.

**Future Renewable Electric Energy Delivery and Management Systems Center (The) (FREEDM)**

Dr. Iqbal Husain, Director

The Future Renewable Electric Energy Delivery and Management Systems Center (FREEDM) (http://www.freedm.ncsu.edu) partners with universities, industry, and national laboratories in 28 states and nine countries to develop technology to revolutionize the nation’s power grid and speed renewable electric-energy technologies into every home and business.

**General H. Hugh Shelton Leadership Center (SLC)**

Barbara H. Mulkey, Director

The mission of the General H. Hugh Shelton Leadership Center (https://sheltonleadership.ncsu.edu) is to inspire, educate, and develop values-based leaders committed to personal integrity, professional ethics, and selfless service.

**Genetic Engineering and Society Center (GES)**

Dr. Jennifer Kuzma and Dr. Fred Gould, Director

The GES Center (http://research.ncsu.edu/ges) will serve as a key regional, national and international hub of interdisciplinary analyses and inclusive dialogue surrounding emerging technologies and society. It will take the lead in using in-depth research and dialogue-based approaches to provide public with rigorous, trustworthy analyses of how products of GE technologies may impact society and the environment.

**Golden Leaf Biomanufacturing Training and Education Center (BTEC)**

Dr. Ruben Carbonell, Director

The mission of Golden Leaf Biomanufacturing Training and Education Center (BTEC) (http://www.btec.ncsu.edu) is to fuel prosperity by positioning North Carolina as a global leader in bioprocess education and biomanufacturing workforce development.

**Industry Research Programs in Forestry (IRPF)**

Dr. Marian McCord, Interim Director

Industry Research Programs in Forestry Center (IRPF) (http://cnr.ncsu.edu/fer/research/center-for-industrial-research-programs-in-forestry) increases value to landowners and citizens through continuous genetic improvement of forest trees; creates innovative solutions to enhance forest productivity and value through sustainable management of site resources; leads in conservation and domestication of forest genetic resources for sustainable economic, ecological, and social benefits for present and future generations.

**Institute for Advanced Analytics (IAA)**

Dr. Michael Rappa, Director
The mission of the Institute for Advanced Analytics (IAA) (http://analytics.ncsu.edu) is to promote graduate education in the emerging field of analytics. Its objective is to educate the citizens of North Carolina and beyond in the concepts, methods, software tools, and applications of analytics that have direct and practical relevance to industry.

**Institute for Emerging Issues (IEI)**
Lesley Boney, Director

The Institute for Emerging Issues (IEI) (http://www.ncsu.edu/iei) is a think-and-do tank that convenes leaders from business, government, nonprofit organizations, and higher education to tackle the biggest issues facing North Carolina.

**Institute for NEXT Generation IT Systems (ITNG)**
Dr. Dennis Kekas, Director

Institute for NEXT Generation IT Systems (ITNG) (http://www.itng.ncsu.edu) provides information technology professional services to state and federal agencies, private and public sector corporations, and research organizations.

**Institute for Nonprofit Research, Education and Engagement (INPREE)**
Dr. Richard Clerkin, Director

The Institute for Nonprofit Research, Education and Engagement (INPREE) (http://nonprofit.chass.ncsu.edu) benefits the university through its presence as an expert source for information on nonprofits, respected partner in research and practice collaborations, recipient of external funding, and developer and manager of educational and research initiatives.

**Institute for Transportation Research and Education (ITRE)**
Dr. E. Downey Brill, Interim Director

Institute for Transportation Research and Education (ITRE) (http://itre.ncsu.edu) carries out research, training and technical support activities in the areas of surface and air transportation for a host of national, state, and local clients to address the nation’s critical transportation issues.

**Kenan Institute for Engineering, Technology and Science (KIETS)**
Dr. Ruben Carbonell, Interim Director

Kenan Institute for Engineering, Technology & Science (KIETS) (http://ncseagrant.org) develops partnerships in basic research, education, commercialization and public outreach with individuals and organizations dedicated to the advancement of science, engineering and technology as a force in improving the economic and social well-being of the nation and the world.

**Nonwovens Institute (NWI)**
Dr. Behnam. Pourdeyhimi, Director

The Nonwovens Institute (NWI) is the world’s first accredited academic program for the interdisciplinary study of engineered fabrics through an innovative partnership of industry, government, and academe operating on an “open” platform. The Nonwovens Institute enables industry and university experts to develop the next generation of nonwovens applications while educating and training future industry leaders.

Contact: EMAIL: nonwovens@ncsu.edu and Website: http://www.thenonwovensinstitute.com/

**North Carolina Clean Energy Technology Center (NCCETC)**
Steve Kalland, Director

The mission of the North Carolina Clean Energy Technology Center (https://nccleantech.ncsu.edu) is to advance a sustainable energy economy by educating, demonstrating and providing support for clean energy technologies, practices, and policies.

**North Carolina Institute for Climate Studies (NCICS)**
Dr. Otis Brown, Director

The objectives of the North Carolina multi-campus Institute for Climate Studies (NCICS) (http://ncics.org) are to promote the discovery of new knowledge about global, regional, and local climate variability and its impacts; and to provide information that is critical for determining trends and validating climate forecasts at all of these spatial scales.

**North Carolina Japan Center (NCJC)**
Dr. John Baugh, Director

The North Carolina Japan Center (NCJC) (http://www.ncsu.edu/ncjapancenter) is a statewide resource, which serves to promote mutual understanding and closer relations between the people of North Carolina and Japan in academic, business cultural, educational, scientific, and technical matters, to the benefit of our state and its people.

**North Carolina Sea Grant College Program (NCSG)**
Dr. Susan Norma White, Director

Through research, outreach and education programs, North Carolina Sea Grant multi-campus College Program (NCSG) (http://ncseagrant.org) provides an unbiased, science-based information to enhance the sustainable use and conservation of ocean and coastal resources to benefit communities, the economy and the environment.

**Nuclear Reactor Program**
Ayman I. Hawari, Director

The mission of the Nuclear Reactor Program is to enhance, promote, and utilize the PULSTAR research reactor and associated laboratory facilities for research, teaching, and extension. Specialized facilities are available to university faculty, students, state and federal agencies, and industry. The laboratory contains the 1 megawatt steady-state, pool-type, PULSTAR nuclear reactor with a variety of associated academic, testing, and research facilities including: Distance Learning through Video and Internet Tele-conferencing; an ultracold neutron source, a neutron...
radiography facility; an intense slow positron beam facility; a powder neutron diffraction facility; a neutron activation analysis and radioisotope laboratory; a low level counting laboratory equipped with high purity germanium gamma spectrometers and beta liquid-scintillation systems; and a Cobalt-60 gamma irradiation facility.

The 50,000 square-foot Burlington Engineering Laboratory complex on the NC State campus houses the Department of Nuclear Engineering and the 1 MW PULSTAR Nuclear Research Reactor Facility.

Contact: e-mail: ayman.hawari@ncsu.edu; website: http://www.ne.ncsu.edu/nrp/index.html; Phone: (919) 515-7294

Small Business and Technology Development Center (SBTDC)

Dr. Scott Daugherty, Director

The multi-campus Small Business and Technology Development Center (SBTDC) (http://www.sbtdc.org) is committed to providing knowledge, education and other supportive resources that enable existing small and mid-sized businesses, emerging entrepreneurs and local/state leaders to innovate and succeed.

Southeast Dairy Foods Research Center (SDFRC)

Dr. MaryAnne Drake, Director

The Southeast Dairy Foods Research Center (SDFRC) (https://sdfrc.ncsu.edu) conducts research, educates scientists, and develops and applies new technologies for processing of milk and its components into dairy products and ingredients with improved health, safety, quality and expanded functionalities that facilitate strategic decisions in the industry.

State Climate Office of North Carolina (SCONC)

Aaron Sims, Interim Director

The State Climate Office of North Carolina (SCO) (http://www.nc-climate.ncsu.edu) is the primary source for NC weather and climate information and is involved in all aspects of climate research, education, and extension services.

W. M. Keck Center for Behavioral Biology (CBB)

Dr. Robert Anholt, Director

The goal of the Keck Center for Behavioral Biology (CBB) (http://keck.sciences.ncsu.edu) is to establish a multidisciplinary environment for interdepartmental training and collaborative research in the fundamental principles that govern animal behavior.

Water Resources Research Institute (WRRI)

Dr. Susan White, Director

website: www.ncsu.edu/wrri/

The Water Resources Research Institute (WRRI) of the University of North Carolina administers and promotes federal/state partnerships in research and information transfer on North Carolina’s water research needs. Located at NC State, WRRI serves all campuses of the UNC system and funds research conducted by faculty and students of senior colleges and universities in North Carolina. Findings from research funded by the Institute help local, state, and federal agencies make better decisions in managing water resources. Graduate and undergraduate research opportunities are available through WRRI funded faculty researchers and student internships are available through its partnership with the U.S. Geological Survey. WRRI also sponsors students to present oral and poster presentations each spring at its annual conference.

William and Ida Friday Institute for Educational Innovation (WIFIEI)

Dr. Glenn Kleiman, Director

The mission of the William and Ida Friday Institute for Educational Innovation (WIFIEI) (http://www.fi.ncsu.edu) is to advance education through innovation in teaching, learning, and leadership.

Financial Aid

Website: go.ncsu.edu/financialaid

Our mission is to make an NC State education affordable and accessible. We provide scholarships, grants, loans, and work funding to support students and their families. Our staff is here to help as you navigate the process of applying for financial aid.

To be considered for financial assistance by the Office of Scholarships and Financial Aid, a student must complete the federal government’s Free Application for Federal Student Aid (FAFSA). This form, submitted online at www.fafsa.gov (http://www.fafsa.gov), evaluates the family’s ability to pay for educational expenses. Students who submit FAFSAs to the federal processor by March 1 are given first priority for need-based scholarship and grant consideration.

By completing the FAFSA, students are considered for all forms of federal financial aid, as well as most types of state and institutional aid. Some academic scholarships may require separate applications. Determination of the applicant’s need is based on estimated educational costs as established by the Office of Scholarships and Financial Aid and a consideration of the family’s financial strength, as determined by the analysis of the FAFSA.

Aid is available on a non-discriminatory basis to all qualifying students based on the applicant’s financial need. Financial aid awards are usually made in the form of “packages,” which combine aid from all sources including the federal government, state and institutional funds, and private entities.

Award packages can include gift aid (scholarships and grants), student loans, and/or employment through the Federal Work-Study program. Students must reapply for aid each year. Renewal is based on continued financial need as well as satisfactory academic progress as defined by the Policy (https://studentservices.ncsu.edu/your-degree/academic-progress) on Satisfactory Academic Progress for Financial Aid Eligibility.

Please visit the Office of Scholarships & Financial Aid website (http://financialaid.ncsu.edu) for more detailed information regarding types of aid and how to apply.
Pack Promise

NC State's mission has always been to extend a quality education to the broadest range of deserving students, regardless of income or financial need. Pack Promise is a formal extension of that mission, reaffirming NC State’s historical commitment to access, affordability, student success, and encouraging first-generation college students to attend college. The financial aid program guarantees a low-debt education, meeting 100% of participants’ demonstrated financial need through a combination of grants, scholarships, Federal Work-Study employment and student loans. Students who submit the FAFSA are automatically considered for Pack Promise.

Scholarships

NC State offers a variety of scholarships (https://studentservices.ncsu.edu/your-money/financial-aid/types/scholarships) for both incoming first-year students and those who are continuing at NC State. Consideration for these awards is given to students who are academically competitive and exhibit special talents or characteristics. Some scholarships require that students also demonstrate financial need. Once admitted to NC State, students can apply for scholarship consideration by using PACK ASSIST (https://ncsu.academicworks.com), NC State University’s scholarship application portal. To maximize scholarship consideration, students should apply for admission by October 15 and complete the FAFSA by March 1.

In addition to these university-wide scholarships, many colleges and departments offer specific awards to students enrolled in their academic programs. These scholarships, funded by alumni, friends of the university, foundations, and industry, are available to both incoming freshmen and to continuing students. Consult the college or department websites for important deadlines and apply online with PACK ASSIST. (https://ncsu.academicworks.com). (https://go.ncsu.edu/packassist)

NC State encourages students to search for private scholarships. Many organizations offer awards based on place of residence, background, professional affiliations and/or field of study. Students should use the many free online scholarship search websites to search and apply for outside scholarships. Links to some of these search services are available on the Office of Scholarships & Financial Aid website (https://studentservices.ncsu.edu/your-money/financial-aid).

University Academic Scholarships

Park Scholarships

The Park Scholarships program, established in 1996, brings exceptional students to NC State University based on outstanding accomplishments and potential in scholarship, leadership, service, and character. The program develops and supports Park Scholars in these areas, preparing them for lifelong contributions to the campus, state, nation, and world.

Approximately 35 scholarships will be awarded this year to outstanding high school seniors for undergraduate study in any discipline at NC State. As one of the most prestigious and comprehensive undergraduate scholarships in the nation, the Park Scholarship covers the cost of attendance for four years and includes educational trips, retreats, and seminars; enrichment grants to fund study abroad, research projects, service activities, and conferences; individualized faculty mentoring; and more.

The Park Scholarships are named for the late Roy H. Park ’31, an NC State alumnus who created the charitable Park Foundation, dedicated to education, media, and the environment. The Park Foundation initially funded the Park Scholars through annual grants; then, in September 2013, the Park Foundation committed $50 million to begin an endowment for Park Scholarships. With others’ support, this endowment will sustain the Park Scholarships program in perpetuity.

To date, 18 classes of Park Scholars have graduated and built a vibrant alumni network. For more information, visit the Park Scholarships website (http://park.ncsu.edu).

Goodnight Scholars Program

The Goodnight Scholars Program, funded by a gift from Dr. Jim and Ann Goodnight, began in 2008 with 25 scholars. Since that time, it has grown into a comprehensive student development program designed to develop scholars into leaders within the STEM and/or education fields. The Program will celebrate its sixth graduating class in May 2017, and will add to its network of alumni stretching from coast to coast in the United States and throughout the world: all of whom are using their STEM talent to address critical societal, economical, and educational issues. Currently, the Program has 200 active students, and will expand to include transfer students beginning in fall 2017.

The scholarship is targeted at low and middle-income families from North Carolina and is limited to students studying in the STEM disciplines or affiliated education majors. The current value of the scholarship is $19,500 and is renewable for up to four years for first-year students, and two years for transfer students. In addition to the scholarship, Goodnight Scholars have access to an assortment of developmental programming focused on their professional and personal growth, as well as enrichment grant funding to support their unique endeavors.

Dr. Jim Goodnight is founder and CEO of the SAS Institute, the world’s leading business intelligence software vendor. Ann Goodnight, director of community relations at SAS, serves on the University of North Carolina Board of Governors and is a former member of the NC State Board of Trustees. Both are NC State graduates. Their frequent interactions with Goodnight Scholars provide unique and invaluable exposure to visionary leaders. Please visit the Goodnight Scholars website (https://goodnight.ncsu.edu) for more information about the program and its exceptional scholars.

The Caldwell Fellows

The Caldwell Fellows is an intensive and comprehensive leadership development program that over 49 years at NC State has produced 1300+ outstanding alumni shaped by the Robert Greenleaf model of Servant Leadership. Supported through endowments held by the NC State Alumni Association, over 100 alumni ‘invest’ in individual Fellows, providing funds for their development through experiential learning. Students selected as Fellows are expected to engage deeply in the program’s rich offerings, which include community based service-learning, wilderness adventure, international engagement, and capstone training at the Center for Creative Leadership. Students receive three years of stipend (divided 70-30 between tuition and funds available for experiential learning), all contingent upon a students’ maintenance of the program ideals and a 3.25 cumulative GPA.

The application period for selection begins in January of each year, after a student’s initial semester(s) at NC State is complete. The program actively seeks applicants from all colleges at NC State. The rigorous selection process is based on an application portfolio which includes...
essays, a short video, letters of recommendation, and the first semester transcript at NC State (minimum 3.25 GPA); high school transcripts and standardized test scores are not reviewed. The application is available on the Caldwell Fellows website (http://ncsu.edu/caldwellfellows). Application reviews by campus faculty and program alumni determine the finalists who are invited to interviews in February. Only first year students are eligible to apply.

The Caldwell Fellows program was created to honor the legacy of John T. Caldwell and to carry out his spirit and ideals. As Chancellor of NC State for 16 years, he presided over the university as a servant leader: inspiring excellence, modeling moral behavior and marshaling the strengths of the entire campus to further the common good. Guided by a deep respect for the potential inside every individual, he held a vision of NC State as a place where young people could find and refine their unique capabilities and potential. The Caldwell endowment is the only university-wide merit-based scholarship funded by alumni and supporters of NC State.

The program also derives from the NC Fellows program, originally known as the Richardson Fellows program, established in 1968 by Smith Richardson of the Richardson Vicks Corporation. Concerned for the state’s future leadership, Mr. Richardson established Fellows Programs on North Carolina campuses and charged them with developing leadership in their promising students. Caldwell Fellows maintain close ties with the internationally acclaimed Center for Creative Leadership, also created by the Smith Richardson Foundation.

Open minds and open hearts are core to the Caldwell Fellows community. Curiosity, creativity, respect for diversity, and commitment to service to the greater good are common qualities which are sought and developed in all Fellows.

Special Academic Programs

Cooperative Education Program (http://www.ncsu.edu/co-op_ed)

This optional program is structured so that students will alternate semesters of study with semesters of practical work as sophomores and juniors. Academic work is spread over a three-year period to permit alternating academic semesters with work-experience semesters. Students earn a salary while they are in industry. This income can prove useful in offsetting college expenses. The Co-op plan can be completed in five years, during which time the student receives 12 to 18 months of industrial experience.

Students in all curricula may apply for the Co-op program if they have a grade point average of 2.5 or better. Application for admission into the Co-op program should be made early in the spring semester of the freshman year, however, it will be considered during the sophomore year or the first semester of the junior year. Undesignated students must be admitted into a degree program prior to beginning the first Co-op assignment. Further information may be obtained from the Cooperative Education Program, 2100 Pullen Hall.

NC State University offers undergraduate students formal opportunities for valuable experiential learning through the STEP (Short-Term Experiential Partnership) Program. STEP is an educational option that allows students to gain real workplace experience in corporate settings, schools, hospitals, government agencies, and non-profit organizations. The STEP Program is open to all NC State undergraduate students who are in good academic standing. Further information may be obtained from the Career Development Center, 2100 Pullen Hall.

The Peer Mentor Program

The Peer Mentor Program (PMP) is a student advisory program that targets first-year African American, Native American, and Hispanic students. The program, founded in 1982, recognizes the challenges first-year students face as they embark upon this new and vastly different segment of their lives. PMP acknowledges the complexity of this situation for minority students, particularly on a predominately white campus. The primary objective of the Peer Mentor Program is to ease this situation by contributing to and aiding in the adjustment of these students to the academic, emotional and social aspects of college life. From a broadened perspective, the program aims to increase and maintain the enrollment and retention of minority students, ensuring that each student maximizes his/her potential.

African American, Native American, and Hispanic upperclassmen are selected as mentors through an application and interview process and are subsequently paired with one to three first-year students. In general, the mentor maintains close contact throughout the year with his/her mentee(s) and acts as a “big brother/sister,” advisor and oftentimes, as a friend. Whenever possible, freshmen are paired with upperclassmen enrolled in the same major and/or college. Through training seminars, a mandatory course and personal experience, peer mentors are prepared to assist first-year students with problems, questions and situations that may arise, or refer them to the appropriate university resources. Ultimately, the peer mentor works to ensure a smooth transition from high school to the college environment. Though it is impossible to determine all of the many benefits of the program for each individual, the Peer Mentor Program remains rewarding, both intrinsically and extrinsically, for first-year students as well as mentors.

This program is coordinated by The Department of Multicultural Student Affairs, call (919) 515-3835 for more information.

Supplemental Instruction

Supplemental Instruction (SI) is a series of weekly review sessions for students in selected sections of historically difficult courses. SI is provided for all students who want to improve their understanding of course material and improve their grades. At each session, students are guided through material by an SI leader, a competent student who has previously taken the course. Three or four sessions are offered at various times each week, usually during the late afternoon and early evening. Attendance is voluntary. A schedule of sessions can be found on the SI website (https://tutorial.dasa.ncsu.edu/si).

Tuition and Fees

Note: Since tuition and fees for the 2017-2018 school year were not approved by the publication date, the rate schedules listed below represent estimated rates. These rates are subject to change. For the most current tuition and fee information available, please see the tuition information on the Cashier’s Office website (http://www.fis.ncsu.edu/cashier/tuition).

- North Carolina Resident- $4,529 per semester (effective 2017-2018 academic year)
**Nonresident**- $13,703 per semester (effective 2017-2018 academic year)

A statement of tuition and fees is posted on each student’s account that registered during a normal registration period. Students are notified via e-mail (eBILL) when a new statement has posted. Payment in full or approved financial aid information must be received by the due date appearing on the statement. The due date is approximately two weeks before classes begin. Students registering during a late registration period will be required to pay their tuition and fees at the time of registration and may be subject to a late registration fee. Fees are the same for both residents and nonresidents and are required of all students. Nonresident students are required to pay an additional $9,174 per semester for tuition.

### Estimated Annual Undergraduate Expenses

**Estimated Annual Undergraduate Expenses**

(Dependent Student living on Campus)

<table>
<thead>
<tr>
<th>Tuition and Fees</th>
<th>First Semester</th>
<th>Second Semester</th>
<th>Full Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC Residents</td>
<td>4,529</td>
<td>4,529</td>
<td>9,058</td>
</tr>
<tr>
<td>Out of State</td>
<td>13,703</td>
<td>13,703</td>
<td>27,406</td>
</tr>
<tr>
<td>Health Insurance</td>
<td>1,111</td>
<td>1,111</td>
<td>2,222</td>
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<tr>
<td>Room Rent</td>
<td>3,309</td>
<td>3,309</td>
<td>6,618</td>
</tr>
<tr>
<td>Meals</td>
<td>2,118</td>
<td>2,118</td>
<td>4,236</td>
</tr>
<tr>
<td>Books and Supplies</td>
<td>541</td>
<td>541</td>
<td>1,082</td>
</tr>
<tr>
<td>Personal Expenses</td>
<td>778</td>
<td>778</td>
<td>1,556</td>
</tr>
<tr>
<td>Transportation - in state</td>
<td>544</td>
<td>544</td>
<td>1,088</td>
</tr>
<tr>
<td>Transportation - off campus/out of state</td>
<td>644</td>
<td>644</td>
<td>1,288</td>
</tr>
</tbody>
</table>

### Total Estimated Expenses

<table>
<thead>
<tr>
<th>Tuition and Fees</th>
<th>First Semester</th>
<th>Second Semester</th>
<th>Full Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC Residents</td>
<td>$12,930</td>
<td>$12,930</td>
<td>$25,860</td>
</tr>
<tr>
<td>Out of State</td>
<td>$22,204</td>
<td>$22,204</td>
<td>$44,408</td>
</tr>
</tbody>
</table>

1. **NOTE:** Tuition and fees are fixed items of cost. The rates listed above are for Undergraduate students in a degree program. Tuition and fee rates for Distance Education courses are billed based on the student's affiliation, see the Cashier's website ([https://studentservices.ncsu.edu/your-money/tuition-and-fees](https://studentservices.ncsu.edu/your-money/tuition-and-fees)) for full details.

2. Health Insurance is billed unless you waive out of the program each semester. For more information, visit the Student Health website ([https://healthypack.dasa.ncsu.edu](https://healthypack.dasa.ncsu.edu)).

3. Room rent is shown as main-campus, double occupancy rate.

4. Meals, books and supplies, other personal expense, and transportation are shown as estimates.

5. For estimated costs of other student classifications please go to the Office of Scholarships and Financial Aid website ([https://studentservices.ncsu.edu/your-money/financial-aid](https://studentservices.ncsu.edu/your-money/financial-aid)).

### Expenses Other than Tuition and General Fees

**Application Fee:** A nonrefundable fee $75 U.S. must accompany each application for admission ($100 for international students). Applicants may pay the fee online using their WolfPAW account.

**Room Rent:** New incoming students receive instructions on how to apply for housing with the letter of acceptance. Continuing students receive room reservation information each January at their residence hall rooms. The 2017-2018 residence hall room rent ranges from $2,995 to $3,894 per semester and plus a mandatory $140.00 ResNet (internet) charge. The Village Apartments charge $3,195 per semester plus mandatory charges for ResNet ($140) and cable television ($46) per person per semester. Wolf Ridge Apartments range from $3,385 per person to $3,995 per person per semester plus mandatory charges for ResNet ($140) and cable television ($46) per person per semester.

**Meals:** During their first academic year, new freshmen living on campus are required to participate in one of the university’s available meal plans. Meal plans are available to all registered students and costs for 2017-2018 range from $750 to $2,175. Students may also pay for meals individually at the various dining facilities available both on and near campus.

**Books and Supplies:** Books and supplies are usually purchased during the first week of classes directly from the NCSU Bookstores. Allow approximately $541 per semester for purchasing books and supplies.

**Personal Expenses:** Personal expenses vary widely among students but the estimate of $778 is based on what students report that they spend on these items.

**Cooperative Education Program Fee:** Required of all participating co-op students for each semester in which they are enrolled in an off-campus work assignment. This fee, set at $490 for the 2017 Fall Semester, the 2018 Spring Semester, or the combined 2018 Summer Sessions, is used for partial support of the Cooperative Education Program staff in job development and placement activities. Students paying this fee are entitled to all university services, facilities, and programs during the semester or combined summer sessions for which they are enrolled.

**COE Program Enhancement Fee:** Students enrolled in the College of Engineering will be charged a COE Program Enhancement Fee. This fee is used for program and infrastructure improvements in the College of Engineering to ensure our engineering students are provided career-ready skills that continue to advantage them in the marketplace. Each semester, undergraduates will be charged $750 (12 or more hours), $562.50 (9-11 hours), $375.00 (6-8 hours), and $187.50 (0-5 hours). Each semester graduate students will be charged $750 (9 or more hours), $499.95 (6-8 hours), and $249.98 (0-5 hours). Engineering students who enroll in a co-op work session will not be billed for the computing fee unless they also enroll in an NC State course.

**Professional Golf Management Fee:** Students enrolled in the Professional Golf Management program (PGM) will be charged $350/semester. The fee pays for golf play and practice privileges at several area golf courses.

### Required Fees

Required fees are levied for services, facilities, and programs available to all students whether or not the student takes advantage of them.
Students are assessed fees based on the course load they are taking. An itemization of required fees and other detailed information concerning expenses or related data can be obtained on the Cashier’s Office website (https://studentservices.ncsu.edu/your-money/tuition-and-fees) or by contacting:

University Cashier’s Office
NC State, Box 7213
Raleigh, North Carolina 27695-7213
919-515-2986 (Option 4), or via e-mail at studentaccounts@ncsu.edu (studentaccounts@ncsu.edu.)

**Refund Policy**

**Reduction in Hours:** The last day to reduce hours and receive a refund or reduction in rates is the same as the last day to register or add hours, typically the 10th day of a fall or spring term and the 4th day of a summer session. Tuition and Fees are not prorated after this date for reduced course loads. Specific dates are posted on the Cashier’s website and in MyPACK Portal.

**Withdrawal:** Dropping all courses for which you are registered constitutes a Withdrawal from the University. Refunds for official withdrawals from NC State University are prorated based upon the percentage of the enrollment period attended. No refunds are made for official withdrawals after 50 percent of the enrollment period has passed. The prorated withdrawal schedule for each semester is publicized on the Cashier’s website. In some instances circumstances such as severe medical issues can justify an appeal of your refund percentage. You may submit an appeal to the Fee Appeals Committee when you believe special consideration is merited. Applications for such appeals may be obtained from the Cashier’s Office website (https://studentservices.ncsu.edu/your-resources/forms).

**Tuition Surcharge***

Any student in the UNC system may be subject to the 50% tuition surcharge if he/she accumulates more than 140 credit hours toward his/her first 4-year baccalaureate degree. A student enrolled in an officially designated 5-year degree program may be subject to the tuition surcharge if he/she accumulates 110% of the necessary credit hours required for graduation.

For more information about tuition surcharge calculation, and coursework or circumstances that qualify as exempt from the surcharge, visit the Cashier’s Office Website (http://www.fsis.ncsu.edu/cashier/tuition/surcharge.asp).

* As set forth by North Carolina General Statute 116-143.7, Section 9.10(a), effective with the 2010-2011 academic year.

**Residency Determination Service (RDS)**

The Residency Determination Service (RDS) was established in coordination with the University of North Carolina (UNC), the North Carolina Community College System (NCCCS), the North Carolina State Education Assistance Authority (NCSEAA), and the North Carolina Independent Colleges and Universities (NCICU) as the centralized service for determining residency for students. This service enables a student to use one residency determination for admissions applications to multiple North Carolina public colleges and universities and to demonstrate residency for state aid programs consideration at all (public and private) North Carolina colleges and universities.

Learn more online at https://ncresidency.cfnc.org.

**Residence Status for Tuition Purposes**

The basis for determining the appropriate tuition charge rests upon whether a student is a resident or a nonresident for tuition purposes. It is the role and responsibility of each public institution of higher education to make an initial classification of each student as in-state or out-of-state for purposes of tuition depending upon the determination of “legal residence” of the student. Students are provided four opportunities to have their classifications reviewed:

**First,** a student’s initial residency determination is based on information provided as a part of the admission process.

**Second,** a student who believes that the initial classification is incorrect or experiences a change in circumstances that the student now believes makes him or her eligible for in-state status may seek re-classification at the institution.

**Third,** a student who believes that the re-classification determination is incorrect may seek an appeal to the Residence Appeals Board at the institution.

**Fourth,** a student who believes that the appeal determination is incorrect may seek a final appeal through the State Residence Committee.

**Initial Classification:** The student’s initial residence classification occurs during the admission application process when the student is first admitted to a community college or UNC institution.

**Reclassification:** A student, accepted for admission, who is initially classified as a nonresident and believes he or she meets the requirements of G.S. 116-143.1, -143.3, or any other applicable laws and regulations may request a reclassification review by the institution. The request for reclassification may be submitted either in direct response to the initial classification (if the student believes the initial classification is erroneous), or at a future time if the student has experienced a change in circumstances that he or she believes makes him or her eligible for in-state resident status. Students must submit requests for reclassification in accordance with approved procedures and application deadlines. The institution will not assume responsibility for initiating such an inquiry independently.

**Residency Reclassification Application Deadlines.** Except for deadlines set out in the General Statutes, institutions (undergraduate or graduate) may set their own deadlines so long as they are not inconsistent with the deadlines. The deadline to submit the reclassification application along with all supporting documentation cannot be later than the 10th business day of the term for which the student is seeking residency reclassification. All conditions necessary for achieving in-state status must still be satisfied prior to the beginning of the academic term for which the student is seeking reclassification. It is the student’s responsibility to provide the documentation necessary to support his or her claims for in-state residency for tuition purposes by the applicable deadlines.

**Residence.** To qualify as a resident for tuition purposes, a person must become a legal resident and remain a legal resident for at least twelve consecutive months (365 days) immediately prior to classification. Thus, there is a distinction between legal residence and residence for tuition purposes. Furthermore, twelve months legal residence means more than simple abode in North Carolina. In particular, it means maintaining a domicile (permanent home of indefinite duration) as opposed to "maintaining a mere temporary residence or abode incident to enrollment"
in an institution of higher education." The burden of establishing facts which justify classification of a student as a resident entitled to in-state tuition rates is on the applicant for such classification, who must show his or her entitlement by the preponderance (the greater part) of the residency information.

Parents’ Domicile. If an individual, irrespective of age, has living parent(s) or court appointed guardian of the person, the domicile of such parent(s) or guardian is, prima facie, the domicile of the individual; but this prima facie evidence of the individual’s domicile may or may not be sustained by other information. Further, non-domiciliary status of parents is not deemed prima facie evidence of the applicant child’s status if the applicant has lived (though not necessarily legally resided) in North Carolina for the five years preceding enrollment or registration.

Effect of Marriage. Marriage alone does not prevent a person from becoming or continuing to be a resident for tuition purposes, nor does marriage in any circumstance insure that a person will become or continue to be a resident for tuition purposes. Marriage and the legal residence of one’s spouse are, however, relevant information in determining residency intent. Furthermore, if both a husband and his wife are legal residents of North Carolina and if one of them has been a legal resident longer than the other, then the longer duration may be claimed by either spouse in meeting the twelve month requirement for instate tuition status.

Military Personnel. Any active duty member of the armed services qualifying for admission to an institution of higher education but not qualifying as a resident for tuition purposes shall be charged the in-State tuition rate and applicable mandatory fees for enrollments while the member of the armed services is abiding in this State incident to active military duty in this State. In the event the active duty member of the armed services is reassigned outside of North Carolina or retires, the member shall continue to be eligible for the in-State tuition rate and applicable mandatory fees so long as the member is continuously enrolled in the degree or other program in which the member was enrolled at the time the member is reassigned. In the event the active duty member of the armed services receives an Honorable Discharge from military service, the member shall continue to be eligible for the in-State tuition rate and applicable mandatory fees so long as the member establishes residency in North Carolina within 30 days after the discharge and is continuously enrolled in the degree or other program in which the dependent relative was enrolled at the time the member is discharged.

Any dependent relative of a member of the armed services who is abiding in this State incident to active military duty, as defined by the Board of Governors of The University of North Carolina and by the State Board of Community Colleges while sharing the abode of that member shall be eligible to be charged the in-State tuition rate without having to meet the usual 12-month durational requirement. If a student ceases enrollment at or graduates from an institution of higher education while classified as a resident for tuition purposes and then both abandons and re-acquires North Carolina domicile within a twelve month period, that person, if he or she continues to maintain the reacquired domicile into re-enrollment at an institution of higher education, may re-enroll at the instate tuition rate without having to meet the usual 12-month durational requirement. However, any one person may receive the benefit of this provision only once.

in which the dependent relative was enrolled at the time the member is discharged. A person charged less than out-of-state tuition rate solely by reason of this section shall not, during the period of receiving that benefit, qualify for or be the basis of conferring the benefit of G.S. 116-143.1.

Grace Period. If a person (1) has been a bona fide legal resident, (2) has consequently been classified a resident for tuition purposes, and (3) has subsequently lost North Carolina legal residence while enrolled at a public institution of higher education, that person may continue to enjoy the in-state tuition rate for a grace period of twelve months measured from the date on which North Carolina legal residence was lost. If the twelve months ends during an academic term for which the person is enrolled at a State institution of higher education, the grace period extends, in addition, to the end of that term. The fact of marriage to one who continues domicile outside North Carolina does not by itself cause loss of legal residence marking the beginning of the grace period.

Minors. Minors (persons under 18 years of age) usually have the domicile of their parents, but certain special cases are recognized by the residence classification statute in determining residence for tuition purposes.

a) If a minor’s parents live apart, the minor’s domicile is deemed to be North Carolina for the time period(s) that either parent, as a North Carolina legal resident, may claim and does claim the minor as a tax dependent, even if other law or judicial act assigns the minor’s domicile outside North Carolina. A minor thus deemed to be a legal resident will not, upon achieving majority before enrolling at an institution of higher education, lose North Carolina legal residence if that person

1. Upon becoming an adult “acts, to the extent that the person’s degree of actual emancipation permits, in a manner consistent with bona fide legal residence in North Carolina” and

2. Begins enrollment at an institution of higher education not later than the fall academic term following completion of education prerequisite to admission at such institution.”

b) If a minor has lived for five or more consecutive years with relatives (other than parents) who are domiciled in North Carolina and if the relatives have functioned during this time as if they were personal guardians, the minor will be deemed a resident for tuition purposes for an enrolled term commencing immediately after at least five years in which these circumstances have existed. If under this consideration a minor is deemed to be a resident for tuition purposes immediately prior to his or her eighteenth birthday, that person on achieving majority will be deemed a legal resident of North Carolina of at least twelve months duration. This provision acts to confer in-state tuition status even in the face of other provisions of law to the contrary; however, a person deemed a resident of twelve months duration pursuant to this provision continues to be a legal resident of the State so long as he or she does not abandon North Carolina domicile.

Lost but Regained Domicile. If a student ceases enrollment at or graduates from an institution of higher education while classified as a resident for tuition purposes and then both abandons and re-acquires North Carolina domicile within a twelve month period, that person, if he or she continues to maintain the reacquired domicile into re-enrollment at an institution of higher education, may re-enroll at the instate tuition rate without having to meet the usual 12-month durational requirement. However, any one person may receive the benefit of this provision only once.
Change of Status. A student admitted to initial enrollment in an institution (or permitted to enroll following an absence from the institutional program which involved a formal withdrawal from enrollment) must be classified by the admitting institution either as a resident or as a nonresident for tuition purposes prior to actual enrollment. A residence status classification once assigned (and finalized pursuant to any appeal properly taken) may be changed thereafter (with corresponding change in billing rates) only at intervals corresponding with the established primary divisions of the academic year.

Transfer Students. When a student transfers from one North Carolina public institution of higher education to another, he or she is treated as a new student by the institution to which he or she is transferring and must be assigned an initial residence status classification for tuition purposes.

Non-U.S. Citizens. Persons who are not U.S. citizens but who have certain visa and immigration statuses that grant them the legal ability to establish and maintain a bona fide domicile in this country are subject to the same considerations as U.S. citizens in determining residence status for tuition purposes. If it is later discovered that the person’s visa or immigration status was obtained fraudulently, the institution shall have the right to seek and collect payment of full, out-of-state tuition, along with fees and costs associated with such collection. Non-U.S. citizens present in the United States under certain visa statuses such as tourists, visitors on business, and temporary foreign/international students do not have the legal capacity to establish a bona fide domicile in this country (and thus, not in North Carolina). As examples, holders of non-immigrant visa statuses such as B, C, D, F, J, M, Q, S, and TN visas (and dependent visas for spouses and children such as a TD visa) cannot establish domicile with these documents, in and of themselves, unless there is a change in their visa status. An EAD, in and of itself, does not confer any status for tuition purposes. If it is later discovered that the person's visa or immigration status was obtained fraudulently, the institution shall have the right to seek and collect payment of full, out-of-state tuition, along with fees and costs associated with such collection. Non-U.S. citizens present in the United States under certain visa statuses such as tourists, visitors on business, and temporary foreign/international students do not have the legal capacity to establish a bona fide domicile in this country (and thus, not in North Carolina). As examples, holders of non-immigrant visa statuses such as B, C, D, F, J, M, Q, S, and TN visas (and dependent visas for spouses and children such as a TD visa) cannot establish domicile with these documents, in and of themselves, unless there is a change in their visa status. An EAD, in and of itself, does not confer any immigrant or non-immigrant status and does not give the EAD holder the legal ability to establish residency for tuition purposes in this state.

UNC System Employees. A person who is a full-time employee, in a permanent position, of The University of North Carolina, or is the spouse or dependent child of a full-time employee, in a permanent position, of The University of North Carolina, and who is a legal resident of North Carolina, qualifies as a resident for tuition purposes without having maintained that legal residence for at least 12 months immediately prior to his or her classification as a resident for tuition purposes. The following categories of persons are eligible for tuition waivers:

Survivors of Deceased Law Enforcement/ Emergency Workers. Tuition waivers are available to the surviving spouse and children of a law enforcement officer (including sheriffs), firefighter, volunteer firefighter or rescue squad worker who was killed as a direct result of a traumatic injury sustained in the line of duty (including both active service and training for active duty). Additional eligibility requirements must be met.

Families of Disabled Law Enforcement/Emergency Workers. Tuition waivers are available to the spouses and children of law enforcement officers (including sheriffs), firefighters, volunteer firefighters, or rescue squad workers who are permanently and totally disabled as a direct result of a traumatic injury sustained in the line of duty (including both active service and training for active service). Additional eligibility requirements must be met.

Note: Decisions on residence for tuition purposes are based on NC G.S. 116-143.1 and 116-143.3 and on the State Residence Classification Manual which was prepared by the General Administration of the University of North Carolina system.

This information is subject to change.

University Housing

Living on campus is an essential part of the Wolfpack experience: that’s why students are required to live in University Housing their first year.

Living on campus is an investment in your success at NC State. With so many programs, activities, studies, research, classes, exams, labs and more, you have plenty to focus on during your time here. Let University Housing take the hassle out of finding the perfect place to live so you can spend more time focusing on your academics. Our residence halls (https://housing.dasa.ncsu.edu/residence-halls) and on-campus apartments (https://housing.dasa.ncsu.edu/apartments) will place you right in the heart of NC State so you can keep a pulse on the Wolfpack.

Undergraduate students must be enrolled in at least 12 credit hours to be eligible to live on campus during the fall and spring terms. Students who must drop below these minimum requirements should contact University Housing to request an exception. During the summer terms, housing is provided for any enrolled student as space permits.

For more information about living on campus, visit:

University Housing
Monday - Friday | 8:00 a.m. to 5:00 p.m.
1112 Pullen Hall
201 Dan Allen Drive
Raleigh, NC 27607-7315

Email: housing@ncsu.edu
Phone: 919.515.2440
Web: housing.dasa.ncsu.edu

Living and Learning Villages

NC State’s Living and Learning Villages (https://housing.dasa.ncsu.edu/villages) are interested-based living communities that engage students both inside and outside the classroom. Villages provide an unparalleled living experience where you’ll make life-long friends and immerse yourself in the NC State community.


The Albright Entrepreneurs Village provides sophomores, juniors, seniors and graduate students across all academic disciplines the opportunity to live, socialize and work with entrepreneurial-minded students. Residents can explore and develop their entrepreneurial interests in an environment that fosters creativity.

Creative, vibrant and colorful only begin to describe the experiences you’ll have as you explore theater, visual arts, crafts, music, dance and more.


The Black Male Initiative strives to establish a brotherhood and develop leaders among black male students. By promoting academic success, personal growth, professional development, and self-responsibility, the group breaks through negative stereotypes and combats challenges facing African-American males in today’s society.


The Eco Village provides an interdisciplinary educational experience that prepares students for life-long sustainable living.


The Engineering Village is an extension to the College of Engineering’s First-Year Engineering program introducing students to the field of engineering; encouraging thoughtful consideration to complex challenges facing our communities.


The Exploratory Studies Village is for students entering the university who are knowingly undecided about a major. A year of guided inquiry and exploration coupled with one-on-one sessions with their academic advisor helps move students through the career planning and decision-making process.


Global Village is a living and learning community for those interested in living and interacting with people from differing backgrounds, experiences, countries, and viewpoints.


The Honors Village provides a unique living-learning environment for students in the University Honors Program (UHP). Academic engagement and research opportunities are core to the mission of the University Honors Program and student experience in the Honors Village assist them in completing UHP requirements.


The Impact Leadership Village provides experiential learning for students who have a passion for leadership and service. Students are given the opportunity to engage in practical application of leadership to real-world issues and explore leadership development through one on one sessions with professionals. ILV enhances students’ college experience and prepares leaders to make their personal IMPACT on the state, nation, and the world.


Students living in the Native Space community will demonstrate growth and learning along three focal points of the living experience: culture, academics and community engagement. Residents will find a deeper awareness of Native American history and drive cultural awareness through participation in Native American Heritage Month and the annual NC State Pow Wow.


The SAY Village is a community for first-year students in any academic discipline who have a passion for working with youth. Students develop one-on-one mentoring relationships with local elementary school students and learn what it means to be a youth advocate.

A collaborative effort between the University Scholars Program and University Housing. Life in the Village centers around a wide range of social, cultural and educational activities, all designed to help students become informed citizens, ethical leaders and active contributors to our campus and community.

- Live in Wolf Village Apartments (https://housing.dasa.ncsu.edu/apartments/wolf-village-apartments)

Provides second-year and transfer students with opportunities to make the most of their NC State experience by focusing on the six core pillars essential to student success: academic success, career development, community and global engagement, diversity, leadership, and life skills.


Encourages and promotes the development and maintenance of a healthy body, mind, and spirit through a wide array of wellness programs and events. Students have the opportunity to experience personal growth while learning about the seven dimensions of wellness.


The WISE Village is a living and learning community created for female freshman and sophomore students majoring in science, technology, engineering, and mathematics. Membership in WISE provides a powerful networking opportunity with other goal-oriented women as you pursue your STEM major.


WOW Village enhances women’s leadership outside the classroom through empowerment, leadership development, self-awareness and diversity/social justice. WOW creates a holistic community that fosters individual women’s growth and development while challenging residents to act as citizens of a global community.
# Academic Calendar

## Fall 2017 Semester

<table>
<thead>
<tr>
<th>Date(s)</th>
<th>Day(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 16</td>
<td>Wednesday</td>
<td>First day of classes</td>
</tr>
<tr>
<td>September 4</td>
<td>Monday</td>
<td>Holiday (Labor Day); university closed</td>
</tr>
<tr>
<td>October 5-6</td>
<td>Thur - Fri</td>
<td>Fall break; no classes</td>
</tr>
<tr>
<td>November 22-24</td>
<td>Wed - Fri</td>
<td>Thanksgiving vacation; no classes</td>
</tr>
<tr>
<td>November 23-24</td>
<td>Thur - Fri</td>
<td>Thanksgiving holiday; university closed</td>
</tr>
<tr>
<td>December 1</td>
<td>Friday</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>December 6</td>
<td>Wednesday</td>
<td>Reading Day</td>
</tr>
<tr>
<td>December 4-13</td>
<td>Mon - Wed</td>
<td>Final examinations</td>
</tr>
<tr>
<td>December 15</td>
<td>Friday</td>
<td>Fall Graduation Exercises</td>
</tr>
<tr>
<td>December 23 - Jan</td>
<td>Sat - Mon</td>
<td>Winter holiday; university closed</td>
</tr>
</tbody>
</table>

## Spring 2018 Semester

<table>
<thead>
<tr>
<th>Date(s)</th>
<th>Day(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 8</td>
<td>Monday</td>
<td>First day of classes</td>
</tr>
<tr>
<td>January 15</td>
<td>Monday</td>
<td>Holiday (Martin Luther King, Jr. Day); university closed</td>
</tr>
<tr>
<td>March 5-9</td>
<td>Mon - Fri</td>
<td>Spring break; no classes</td>
</tr>
<tr>
<td>March 30</td>
<td>Friday</td>
<td>Spring holiday; no classes</td>
</tr>
<tr>
<td>April 27</td>
<td>Friday</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>May 2</td>
<td>Wednesday</td>
<td>Reading Day</td>
</tr>
<tr>
<td>April 30-May 9</td>
<td>Mon - Wed</td>
<td>Final examinations</td>
</tr>
<tr>
<td>May 12</td>
<td>Saturday</td>
<td>Spring Commencement</td>
</tr>
</tbody>
</table>

## Summer Session I 2018

<table>
<thead>
<tr>
<th>Date(s)</th>
<th>Day(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 16</td>
<td>Wednesday</td>
<td>First day of classes</td>
</tr>
<tr>
<td>May 28</td>
<td>Monday</td>
<td>Holiday (Memorial Day); university closed</td>
</tr>
<tr>
<td>June 20</td>
<td>Wednesday</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>June 21 - 22</td>
<td>Thur - Fri</td>
<td>Final examinations</td>
</tr>
</tbody>
</table>

## Summer Session II 2018

<table>
<thead>
<tr>
<th>Date(s)</th>
<th>Day(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 25</td>
<td>Monday</td>
<td>First day of classes</td>
</tr>
<tr>
<td>July 4</td>
<td>Wednesday</td>
<td>Holiday (Independence Day); university closed</td>
</tr>
<tr>
<td>July 27</td>
<td>Friday</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>July 30-31</td>
<td>Mon - Tues</td>
<td>Final examinations</td>
</tr>
</tbody>
</table>

Note: Dates in this publication are those that have been approved by appropriate agencies of the university at the time of publication (June 2017). Changes may be announced in official university publications subsequent to this publication and maintained on the Student Services Center website.
Academic Degrees and Programs

Undergraduate Degrees

College of Agriculture and Life Sciences
Agricultural Business Management; Agricultural and Environmental Technology; Agricultural Science; Agricultural Education; Animal Science; Biochemistry; Biological Engineering; Bioprocessing Science; Extension Education; Food Science; Horticultural Science; Natural Resources; Nutrition Science; Plant and Soil Science; Plant Biology; Poultry Science; Soil and Land Development; Turfgrass Science

College of Design
Architecture (fifth year program); Art and Design; Design Studies; Graphic Design; Industrial Design

College of Education
Elementary Education; Mathematics Education-Middle School or Secondary; Middle Grades Education- Language Arts & Social Studies; Science Education-Middle School or Secondary; Technology, Engineering and Design Education

College of Engineering
Aerospace Engineering; Biomedical Engineering; Chemical Engineering; Civil Engineering; Computer Engineering; Computer Science; Construction Engineering; Electrical Engineering; Environmental Engineering; Industrial Engineering; Materials Science and Engineering; Mechanical Engineering; Mechanical Engineering Systems BSE-Offered at Havelock, NC; Mechatronics Engineering-Offered at UNC-Asheville; Nuclear Engineering

College of Humanities and Social Sciences
Anthropology; Arabic Language and Culture; Arts Studies; Asian Language; Communication; Criminology; English, Teacher Education option; English; French Language & Literature; French Language & Literature, Teacher Education option; German Studies; History; History, Teacher Education Option; Interdisciplinary Studies: Africana Studies; Interdisciplinary Studies: Self Design; Interdisciplinary Studies: Women & Gender Studies; International Studies; Leadership in the Public Sector; Philosophy; Political Science; Psychology; Religious Studies; Science, Technology and Society; Social Work; Sociology; Spanish Language & Literature; Spanish Language & Literature, Teacher Education Option

Poole College of Management
Accounting; Business Administration; Economics

College of Natural Resources
Environmental Sciences; Environmental Technology and Management; Fisheries, Wildlife and Conservation Biology; Forest Management; Natural Resources: Concentration in Ecosystem, Concentration in Policy & Administration; Parks, Recreation and Tourism Management; Professional Golf Management; Paper Science and Engineering; Sport Management; Sustainable Materials & Technology

College of Sciences
Biological Sciences; Chemistry; Genetics; Geology; Marine Sciences; Mathematics and Applied Mathematics; Meteorology; Microbiology; Natural Resources: Marine & Coastal Resources; Physics; Statistics; Zoology

College of Textiles
Fashion & Textile Design; Fashion & Textile Management; Polymer & Color Chemistry; Textile Engineering; Textile Technology

University College
Undecided/Exploratory Studies

Graduate Degrees
For information about graduate programs at NC State, including admissions information, deadlines, international applications, financial support, and a list of graduate programs and their requirements, consult the NC State Graduate School website (http://www.ncsu.edu/grad/future-students). Also, please refer to the Graduate Catalog (http://www.ncsu.edu/grad/catalog).

Undergraduate Minors
Some departments at NC State offer undergraduate academic minors for students interested in a program of study in an area outside their major. All minors require at least 15 credit hours and may be either departmental or interdepartmental. Courses within the minor program may be used to satisfy university general education requirements, and the general requirements, including free electives, of a major curriculum, as applicable.

Minors are completely optional, the only requirement being that a student may not minor in the same discipline as their major. Only students who have matriculated into a major are eligible for a minor. A minor cannot be completed after graduating. Students pursuing a minor must consult with the minor coordinator on a plan of work and should file a copy of this plan with the advisor for their major as soon as the minor is declared. The student should also submit a Declare a Minor form signed by the minor coordinator to Registration and Records no later than the end of the regular registration period one semester prior to the semester of graduation. Successful completion of the minor will be noted on the final transcript following graduation. For more information about the minors available at NC State, please see the Minors website (https://oucc.dasa.ncsu.edu/undergraduate-academic-programs/academic-minors).

Academic Minors:
Accounting
Africana Studies
Agricultural Business Management
Agricultural and Environmental Technology
Agroecology
American Literature
Animal Science
Anthropology
Applied Ecology
Applied Sociology
Art and Design
Arts Entrepreneurship
Arts Studies
Applicants must have graduated from an accredited high school with at least a 2.25 GPA (on a 4.0 scale), or have successfully passed the General Education Development (GED) test before being admitted to the Agricultural Institute at NC State. An application and a high school transcript must be submitted through CommonApp.org and supporting documents must be submitted directly to the Admission Office at NC State University. One letter of recommendation from someone other than a family member should be submitted directly to the Agricultural Institute Office. The regular college entrance exam (Scholastic Aptitude Test – SAT) or ACT is not required, but recommended. The 2.25 minimum high school GPA is waived for transfer students and for applicants 21 years or older at the time of enrollment in the Agricultural Institute. An Associate of Applied Science degree is awarded. Fields of study are:

- Agribusiness Management
- Field Crops Technology
- General Agriculture
- Livestock and Poultry Management
- Horticultural Science Management
• Ornamentals and Landscape Technology Concentration
• Small Scale Farming Concentration
• Turfgrass Management

Arts Studies
NC State offers a rich variety of courses in the history, analysis, and production of the arts - dance, film, music, theatre, and visual arts. Many of these courses are open to students without prerequisite, and are offered by 13 departments in four different colleges of the university.

In addition to these courses, most of which focus on a single art form, the Arts Studies Program offers courses which deal with several arts media or with the arts in connection with other areas, including politics, science, technology, and more. These courses are listed in the back of this catalog and the schedule of courses each semester under the ARS prefix.

For students who want to concentrate in Arts Studies, a major in Arts Studies is available. It is administered by the Arts Studies Program in the College of Humanities and Social Sciences. In addition, there are minors in Arts Studies, Music, Theatre, and Film Studies.

Opportunities for students to participate in arts activities offered by Arts NC State include many instrumental and choral groups, student productions in University Theatre, instruction in the Craft Center, courses and concerts by the Dance Program, and visual art exhibitions. For these activities, many of which are integrated with academic courses, see Student Activities in this section of the catalog.

The Arts Studies Program together with the Music Department sponsors the Arts Now Series. The Series includes performances of and lectures about contemporary performance works that include music. Guest performers, composers, dancers, and video artists appearing in the series range from regionally based artists to international guests from Europe, Asia, and South America.

Pre-professional Programs
Pre-Law Services Office of Advising Support, Information and Services
Law schools neither prescribe nor recommend a particular undergraduate curriculum for prospective candidates. A student may prepare for law school within any of the majors offered by the nine undergraduate colleges. The University Coordinator of Pre-Law Services, in conjunction with the student's academic adviser, assists any student with an interest in attending law school and provides information and planning strategies to prepare for this process. This can include: what needs to be considered in the academic record; the selection of appropriate electives and concentrations; law schools to consider; as well as, where to look for financial information. The Coordinator also works with the Pre-Law Students Association (PLSA), which is open to all interested students. During the year the PLSA provides programs that have included: NC State Law School Fair, local attorneys, panel of Law School students, Law School Directors of Admission, information on the admissions process. At this time, the Pre-Law Advising Program is administratively housed in the Office of Advising Support, Information and Services within the Division of Undergraduate Academic Programs. For further information, contact the University Pre-law Coordinator Mary A. Tetro, 211P Park Shops, (919) 513-0912. You may also visit the Pre-Law website (http://www.ncsu.edu/prelaw).

Pre-Professional Healthcare Programs and Advising: Pre-Med, Pre-Dent, and Pre-Opt, Pre-Pharm, Pre-PT/OT, Pre-PA, Nursing etc.
Many NC State undergraduate students are planning a career in the health professions and will apply to attend medical, dental, optometry or other health care graduate schools after graduation. NC State provides a variety of services to help students explore the health professions as a possible career choices and to enhance a student's competitiveness for admission into a health professions school. These services include the Health Professions Advising Center or Health PAC (see the information below and website link). Health PAC assists with healthcare career planning and advising, mentoring, letters of evaluation, internship and clinical opportunities, as well as numerous programs and resources to help students achieve their educational and career goals in human healthcare. The center also assists in the actual application process including personal statement development, interview preparation and more, all targeted at developing the most competitive, well rounded applicants.

Health professional schools do not require students to obtain a designated "Pre-Health" degree. Instead, they seek students who have demonstrated academic success and who also have excelled in other areas including clinical and service experience as well as social development. Like most schools, NC State does not offer a dedicated "Pre-Health" curriculum. Instead we recommend that students interested in health professions select the academic major that is of greatest interest to them while ensuring that they select courses that provide a strong foundation in the natural sciences required by most professional programs for admission. These include biology, chemistry, physics, and calculus along with recommended courses like genetics and biochemistry. It is also recommended that students select courses that improve communication and writing skills as well as provide a strong foundation in the humanities, psychology and ethics. Students interested in a program that focuses on Human Biology should visit the following link on the Biological Sciences website (http://bio.sciences.ncsu.edu).

For further information on Health PAC, contact Anita Flick, MD at health_pac@ncsu.edu or visit the Health PAC website (http://hpac.dasa.ncsu.edu).

The Health Professions Advising Center (Health PAC) and the NC State Health Professions Review Committee
In addition to a student's departmental academic adviser, the university provides the Health Professions Advising Center (Health PAC) to further assist students interested in health careers. House in 2720 Bostian Hall, Health PAC is available to all NC State students (including graduate and post bac students as well as alumni). Health PAC is dedicated to mentoring students throughout their college career, helping them to prepare their application for post-graduate studies. The center assists pre-health students by answering questions and helping them explore health career options, locating and obtaining clinical and service experience, and developing future career skills (such as technical writing, research review, etc.). Health PAC also helps students compile an Achievement Portfolio that provides an accounting of their academic, clinical, service/community, and social achievements for incorporation into their application to health programs and for the subsequent interview process.
The NC State Health Professions Review Committee is available to review student applications and to prepare a university committee recommendation, which is then submitted to each of their selected schools. The composite includes not only each student’s individual letters of recommendation but also a university recommendation of the applicant along with a detailed letter from the NC State Health Professions Review Committee Chair highlighting each student's strengths and accomplishments. Many professional programs rely heavily on these university recommendations and often require them as a component of their application screening process.

For more information on the Health Professions Advising Center and NC State Health Professions Review Committee, please contact Anita Flick, MD at health_pac@ncsu.edu or visit the Health Professions website (http://hpac.dasa.ncsu.edu).

Pre-Veterinary Program
This area of study is a non-degree option offered by the College of Agriculture and Life Sciences. This option is available to students majoring in animal science, poultry science, zoology, or biological sciences as well as in many other science curricula, such as biochemistry or chemistry. If a student is accepted to veterinary medical school before completion of their undergraduate degree, some course credits may be transferable from the veterinary program toward completion of the Bachelor of Science degree. Arrangements for this procedure should be made with the degree granting school or department prior to entering veterinary college. For further information, contact the Academic Programs Office of the College of Agriculture and Life Sciences, (919) 515-2614, or the Admissions Office for Veterinary Students of the College of Veterinary Medicine, (919) 513-6205, for general information concerning admission to the Doctor of Veterinary Medicine program at NC State.

College of Agriculture and Life Sciences
111 Patterson Hall
NCSU Box 7642
Raleigh, NC 27695-7642
Phone: (919) 515-2614
fax: (919) 515-5266
e-mail: cals_programs@ncsu.edu
Visit the CALS website (http://www.cals.ncsu.edu).

Academic programs in the college represent a unique blending of the agriculture and life sciences. Agriculture is a diverse industry that touches all of us in many ways. The life sciences provide foundations for studying life and the role of plants and animals in the environment.

The goals of the instructional program in the College of Agriculture and Life Sciences include proving relevant, scientific, and practical knowledge of the food, agricultural, and life sciences to its students. These programs emanate from a highly qualified and accomplished faculty committed to academic excellence and the development of the individuals to their personal and professional potential. Central to the college’s goals is the cultivation of interdisciplinary problem-solving skills that will serve its graduates well as they pursue a lifetime of learning and professional experiences.

The overall objectives of the academic program include:

• To provide an opportunity for a broad university education
• To provide a variety of learning experiences
• To offer a choice of specialized majors in agriculture and life sciences
• To prepare for graduate or professional programs

Degrees
• The Bachelor of Science degree is conferred upon the completion of one of the curricula in this college.
• The degrees of Master of Science, or Master of (non-thesis) degrees are offered in the various departments in the college.*
• The Doctor of Philosophy degree is offered in the following subject areas: animal science and poultry science, biochemistry, bioinformatics†, biological and agricultural engineering, biomathematics†, crop science, economics, entomology, fisheries, wildlife & conservation biology, food science, functional genomics†, horticultural science, immunology†, microbiology†, nutrition, physiology, plant biology, plant pathology, and soil science.*

† Further information on graduate offerings may be found in the Graduate Catalog.

Curriculum Offerings and Requirements
A freshman enrolling in Agriculture and Life Sciences has common core courses. The first year-courses are appropriate in all curricula. This approach allows the student time to explore various programs before selecting a curriculum. The student selects a major in a department or interdisciplinary program. All departments offer science curricula (intended primarily for students who anticipate attending graduate or professional school), several technology curricula, and the Agricultural Business Management curriculum is offered in the Department of Agriculture and Resource Economics.

Departmental Majors
Business major:
• Agricultural Business Management

Science majors:
• Agricultural Education
• Agricultural Science
• Animal Science
• Biochemistry
• Biological engineering (joint program with the College of Engineering)
• Bioprocessing Science
• Extension Education
• Food Science
• Horticultural Science
• Natural Resources
• Nutrition Science
• Plant Biology
• Plant and Soil Science
• Poultry Science
• Soil and Land Development

Technology/Industry majors:
• Agricultural and Environmental Technology
• Animal Science
• Food Science
• Horticultural Science
• Plant and Soil Science
• Poultry Science
• Turfgrass Science

Common First Year in the Life Sciences

Beginning in fall 2014, CALS students interested in a life science-related major will pursue a common first year course of study. At the time of admission, students will select an intended major. They will not formally matriculate into that program until after their freshman year.

Academic Minors

Several departments in the College of Agriculture and Life Sciences offer a minor in their discipline. Students interested in additional information regarding a minor should contact the appropriate departmental office. At present, the following minors are available:

<table>
<thead>
<tr>
<th>Minors</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Business Management*</td>
<td>Agricultural and Resource Economics</td>
</tr>
<tr>
<td>Agricultural and Environmental Technology</td>
<td>Biological and Agricultural Engineering</td>
</tr>
<tr>
<td>Agroecology</td>
<td>Crop Science</td>
</tr>
<tr>
<td>Animal Science</td>
<td>Animal Science</td>
</tr>
<tr>
<td>Applied Ecology</td>
<td>Department of Applied Ecology</td>
</tr>
<tr>
<td>Biotechnology</td>
<td>Academic Programs</td>
</tr>
<tr>
<td>Crop Science</td>
<td>Crop Science</td>
</tr>
<tr>
<td>Entomology</td>
<td>Entomology</td>
</tr>
<tr>
<td>Extension Education</td>
<td>Agricultural and Extension Education</td>
</tr>
<tr>
<td>Feed Milling</td>
<td>Poultry Science</td>
</tr>
<tr>
<td>Food Science</td>
<td>Food, Bioprocessing &amp; Nutrition Sciences</td>
</tr>
<tr>
<td>Horticultural Science</td>
<td>Horticultural Science</td>
</tr>
<tr>
<td>Leadership in Agriculture and Life Sciences</td>
<td>Agricultural and Extension Education</td>
</tr>
<tr>
<td>Nutrition</td>
<td>Food, Bioprocessing &amp; Nutrition Sciences</td>
</tr>
<tr>
<td>Plant Biology</td>
<td>Plant Biology</td>
</tr>
<tr>
<td>Plant Biosecurity &amp; Regulatory Science</td>
<td>Plant Pathology &amp; Entomology</td>
</tr>
<tr>
<td>Poultry Science</td>
<td>Poultry Science</td>
</tr>
<tr>
<td>Soil Science</td>
<td>Soil Science</td>
</tr>
<tr>
<td>Turfgrass Science</td>
<td>Crop Science</td>
</tr>
</tbody>
</table>

Undergraduate Certificate Programs

• Agricultural Business Management* (Post Baccalaureate & Undergraduate level programs available)
• Agricultural Leadership**
• Agronomic Crop Production*
• Animal Nutrition**
• HACCP/Food Safety Managers*
• Feed Milling**
• Fundamentals of Entomology**
• General Horticulture*
• Plant Pests, Pathogens & People**
• Soil Science**

Available via Distance Education
** Available via Distance Education and On Campus

Student Activities

Students in the College of Agriculture and Life Sciences have numerous opportunities to take part in broadening extracurricular activities. Most departments have student organizations that provide the professional as well as social experience. Representatives of these clubs form the Agri-Life Council. This council is the student organization representing the college. Student tours provide an opportunity to see firsthand the application of classroom principles. In addition, students representing agrimarketing, agronomy, animal science, horticultural science, food science, poultry science and soil science compete regionally and nationally in a number of activities, providing student members a chance to learn by travel as well as by participation.

Honors Program

Highly motivated students in our college have an opportunity to enhance their education experience through the invitation-only CALS Honors Program. The program inspires students to take ownership of their education, explore their passions, and pursue their academic goals beyond the classroom. Each year, we invited incoming freshmen meeting the academic requirements to join the CALS Honors Program as part of the NCSU admissions procedure. If space allows, supplemental invitations may occur in the all of each year for students that have completed 30 credit hours at NCSU and meet our academic requirements. Participating students can choose a P.A.T.H. (pathway to honors) focused on rigorous coursework, independent research or study abroad. Please visit the 'New CALS Honors' page for specific details here (https://cals.ncsu.edu/students/cals-opportunities/honors).

Joint College Honors Program

The Department of Molecular and Structural Biochemistry’s Honors Program, which is administered through the College of Agriculture and Life Sciences and the College of Sciences, is designed to encourage excellent undergraduate biochemistry majors to develop their academic potential through a selection of courses and research that will challenge their abilities and better prepare them for postgraduate careers.

Admission: Students must complete the three-semester series of Calculus I, II, and III (MA 241, and MA 242) and calculus based Physics I and II (PY 205 and PY 208). [Exceptions may be made for highly talented students who transfer into the Biochemistry curriculum after their Freshman year, and had already taken MA 131 and MA 231.]

In the first semester of their Junior year (usually in the Fall semester), students who qualify in terms of their mathematics and physics coursework and have an overall grade-point average of 3.5 or higher are invited to enter the Biochemistry Honors Program. Those students who qualify based on their mathematics and physics courses and have an overall grade-point average of 3.8 or better may be invited to enter the Biochemistry Honors Program during the second semester of their Sophomore year (usually in the Spring semester).
The Undergraduate Coordinator receives nominations from Advisors and prepares recommendations for the College of Sciences Honors Programs Committee.

Requirements: Biochemistry COS Honors Students are required to take Physical Chemistry I and II (CH 431 and CH 433), and to earn at least 3 credit hours in laboratory research (e.g., BCH 492 or BCH 493 or AL 498H and AL 499H). Six credit hours of research credit are highly recommended. Written scientific reports based on the students' research are required. In addition, students in Honors Programs must complete at least 9 credit hours of coursework drawn from at least two of the following three categories:

Category 1: Special Courses for Honors Students (courses or sections designated S or H, such as ENG 101H, MA 341S, etc.)

Category 2: Advanced Courses, such as 500-level courses

Category 3: Independent Studies and Research (such as BCH 492, BCH 493, or AL 498H and AL 499H) [Minimum of three hours in this category]

Certification: Following receipt of an invitation to enter the Biochemistry Honors Program, a student should make an appointment with the Undergraduate Coordinator (Room 126 Polk Hall) to inform the department of the student's desire to accept or reject the invitation. A Completion of Requirements form is prepared for each student entering the program, and as Honors requirements are met, they are recorded on the form. Upon completion of all Honors Program Requirements, the Honors Program Director (Undergraduate Coordinator) certifies that the student should receive appropriate recognition upon graduation.

Honor Societies

Students in all majors with strong academic records are recognized by national organizations that have local chapters, Phi Beta Kappa, Gamma Sigma Delta, Alpha Zeta, Alpha Epsilon Delta, and Phi Kappa Phi.

Scholarship Program

The College of Agriculture and Life Sciences awards approximately 620 scholarships each year based on a combination of selection factors including merit, financial need, academic major and/or outside interests. In order to apply for scholarships in the College of Agriculture and Life Sciences and to ensure proper consideration for all scholarships, students must complete the College’s online scholarship application each year by deadlines noted on our scholarship website: cals.ncsu.edu/scholarships. Students with questions regarding scholarships or financial aid can email cals_scholarships@ncsu.edu.

Jefferson Scholars in Agriculture and Life Sciences and the Humanities

The Thomas Jefferson Scholars Program in Agriculture and Life Sciences and the Humanities is a joint program of the College of Agriculture and Life Sciences and the College of Humanities and Social Sciences. It is a program that leads participants to two degrees: one concentrating in an area of agriculture or life science and one in an area of humanities or social science. All majors in each college are available to meet each student’s particular interests and career goals. The purpose of the program is to produce potential leaders in agriculture and the life sciences who have not only technical expertise but also an appreciation for the social, political, and cultural issues that affect decision-making. The program includes special classes for Jefferson Scholars and a variety of social and service activities. Each spring a number of entering freshmen are chosen to participate in the Jefferson Program. Successful participants receive scholarship support after the sophomore year.

Accepted students interested in applying to the Jefferson Scholars program should contact either of the following people before January 15. An online application is available. Visit the Jefferson Scholars website (http://harvest.cals.ncsu.edu/jefferson-scholars) for details.

Dr. John Dole, Interim Associate Dean and Director of Academic Programs
College of Agriculture and Life Sciences
NCSU Box 7642, Raleigh, NC 27695
Phone: (919) 515-2814

Dr. Derek Aday, Assistant Director of Academic Programs
College of Agriculture and Life Sciences
NCSU Box 7642, Raleigh, NC 27695
Phone: (919) 515-7484

Dr. Beth Wilson, Director of the Agricultural Institute
Assistant Director of Academic Programs
College of Agriculture and Life Sciences
NCSU Box 7642, Raleigh, NC 27695
Phone: (919) 515-3248

Interdisciplinary Programs

Curricula in Plant and Soil Sciences

Williams Hall, Room 2234

David A. Crouse, Undergraduate Coordinator of Crop and Soil Sciences; Williams Hall, Room 2234
Phone: (919) 515-7302

Visit the Department of Crop and Soil Sciences (https://cropsoil.ncsu.edu) online.

Plant and Soil Sciences is a diverse program with concentrations in agroecology, agronomic business, agronomic science, crop biotechnology, crop production, and soil sciences.

Agroecology is the study of the ecological, environmental, economic and social interactions of agricultural production systems. In this program students learn about the latest practices and research innovations in sustainable agriculture locally and internationally through classroom studies, hands-on experiences, and field trips. This is a multi-disciplinary concentration that will prepare students for a diversity of employment opportunities.

Agronomic Business concentration is a degree program intended to prepare students for careers in marketing, management, sales, or other economic segments of agri-industry. This concentration is a science based curriculum with built-in flexibility that allows students to choose from a wide range of ARE or BUS electives, plant science courses, and career path electives.

Agronomic Science and Crop Biotechnology concentrations are degree programs designed for students who wish to establish professional careers in areas such as applied plant science and crop production research, crop biotechnology, plant breeding, genetics, or physiology. This program will be especially beneficial for students who wish to pursue advanced degrees in areas of applied plant sciences.
Students preparing for plant biotechnology, breeding, or genetics careers must have a broad and thorough knowledge of the life and plant sciences, as well as hands-on experience in the most recent scientific techniques. At the same time, scientists engaged in plant genetic manipulation at all levels should clearly understand the potential impact engineered plants may have in field production environments. The objectives of these two concentrations are to merge the scientific/technical expertise in the life sciences with knowledge of plant growth and plant development to prepare students for careers in today’s rapidly changing agricultural industries.

**Crop Production** concentration prepares students for career in the crop management, production, or technology. Today’s job market demands that or graduates be well versed in the life sciences and the technical aspects plant agricultural production. This concentration is a science based curriculum with built-in flexibility that allows students to choose from a wide range of crop science courses and career path electives. The flexibility will enable our graduates to have successful careers in plant agriculture-related positions such as international agricultural development, plant protection, plant inspection, biosecurity, precision agricultural technologies, specialty crop production, and farm management.

**Soil Science** concentration provides a focus on the soil resource component of crop and soil management. This concentration provides greater breadth and depth to the role of the physical, chemical and biological properties of the soil. A strong science background allows students to select from a variety of professional career opportunities. In addition to the role of soil in crop production, the soil science concentration prepares students for careers in waste management, watershed/water quality protection, erosion and sediment control, landing planning and soil survey. Opportunities exist in the public sector as well as the private with the potential to become licensed as a professional soil scientist.

The Departments of Crop and Soil Sciences administer the Plant and Soil Science curriculum jointly. Crop Science relates primarily to the agroecology, biotechnology, genetics, breeding, physiology and management of field crops. Soil Science is oriented toward soil physics, chemistry, origin, microbiology, fertility and management. For further information and employment opportunities, see the departmental headings for Crop and Soil Sciences.

Specific curriculum requirements are available on the Registration and Records website (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php#requirement-courses-list).

**Curricula in Natural Resources**

John S. Russ, Undergraduate Coordinator Agricultural and Resource Economics; Nelson Hall Room 3346

David A. Crouse, Undergraduate Coordinator Soil Science; Williams Hall, Room 2234

Visit the Department of Crop and Soil Sciences (https://cropsoil.ncsu.edu) online.

Wise use of all our natural resources (soil, water, air, minerals, flora, fauna, and people) for the benefit of current and future members of society is the goal of natural resource management. This important challenge recognizes the interdependence of people with their environment and requires an integrated, multi-disciplinary approach to solving society’s resource problems. Population growth, rising incomes, life style changes and urbanization lead to more intensive use of all natural resources. These trends present challenges to resource managers who must be trained in the basic principles of several disciplines in order to develop and apply sound management strategies to our resource problems. Natural resource professionals must understand resources and the social systems governing their use. They must be able to work in teams to analyze potential effects of resource use and to design ways to make efficient use of natural and environmental resources for current and future generations.

To accommodate the breadth and complexity of natural resource management, the Bachelor of Science degree in Natural Resources is a campus-wide program involving three colleges and four departments that administer seven concentrations. A common core of 84 credit hours of course work provides a balanced foundation in communication, humanities, social sciences, mathematics and the natural sciences. The core course requirements include a freshman orientation course and a senior level applications course that natural resource majors in all concentrations must complete. Within the College of Agriculture and Life Sciences, three concentrations are available: Economics and Management, Soil Resources, and Soil and Water Systems. For information on other concentrations see the Department of Forestry in the College of Natural Resources and the Department of Marine, Earth and Atmospheric Sciences in the College of Physical and Mathematical Sciences.

Specific curriculum requirements are available on the Registration and Records website (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php#requirement-courses-list).

**Department of Agricultural and Human Sciences**

As of July 1, 2016, the Department of Agricultural and Extension Education has merged with the Department of Youth, Family and Community Sciences to become the Department of Agricultural and Human Sciences. The information listed below is for the Department of Agricultural and Extension Education. Click here for information on Youth, Family and Community Sciences (http://yfcs.cals.ncsu.edu).

Agricultural and Extension Education is a broad field of study and practice representing the blending of agricultural and behavioral sciences into educational programs for youth and adults. Agriculture impacts everyone’s life in terms of food, water, air, clothing, homes and the quality of life. Central to the department’s goals is the formal and nonformal teaching of problem-solving and learning skills for a lifetime of growing, evolving, and changing. The Agricultural Science degree provides graduates with both agricultural skills and leadership skills that are essential to leadership positions in the agricultural industry.

Regardless of which degree option you choose, the curriculum in agricultural and extension education has some common features. It begins with the general education courses that are required throughout the university. These courses are essential to developing a well-educated graduate. The second component of the agricultural and extension education program provides students with a broad understanding of agriculture. Students complete introductory and advanced courses in various agricultural disciplines. These courses will develop the student’s knowledge in agriculture essential to providing information to a wide variety of clients. This exposure to so many areas of agriculture also helps students decide on a specific area of agriculture in which to specialize. The third component of the department’s program requires...
students to complete a specialty area or a concentration in at least one area of agriculture. This specialization usually qualifies students for a minor in an agricultural discipline, which may provide students with additional employment opportunities. The final component of the agricultural and extension education program involves the courses related to providing information to people. These courses will vary, depending upon degree program selected.

There are many professional opportunities that are available to people participating in departmental programs. Graduates have the choice to plan for teaching, administrative leadership and public relations positions in secondary schools, community colleges, universities, Cooperative Extension Service, and agribusinesses. Graduates are highly qualified to enter agricultural careers and in agricultural and extension education. Career placement assistance is provided to all graduates.

**Curricula**

The Agricultural Education curriculum encompasses areas of study that will enable students to participate effectively in planning, promoting, and initiating educational programs in agriculture. The program leads to a Bachelor of Science degree and is designed to prepare teachers of agriculture for secondary schools and community and technical colleges. The demand for agricultural education teachers exceeds present supply in the Carolinas, Virginia, and throughout the nation.

The Extension Education curriculum leads to a Bachelor of Science and is designed to primarily prepare individuals for careers with the Cooperative Extension Service. Students are required to complete both classroom and laboratory studies on the NC State campus and a required closely supervised; semester-long practicum in a County Extension Center during their senior year. Students have two concentrations available in this curriculum: Agriculture and Natural Resources and Youth Leadership Development. Students in the Agricultural and Natural Resources concentration select an area of study that prepares them for the important role as agricultural and/or natural resource Extension agents. Students in the Youth Leadership Development concentration take courses to prepare them to be the catalysts for positive change within communities as the educators and administrators of youth leadership programs (such as 4-H).

The Agricultural Science curriculum is designed to prepare graduates for careers in a wide variety of agricultural industry positions. The program leads to a Bachelor of Science degree in Agricultural Science. Students complete a minimum of two agricultural specialty areas, increasing their options for careers in agriculture upon graduation. In addition to preparation in the agricultural industry, students also complete a series of leadership courses to prepare them for leadership positions within the agricultural industries. Internships are not required in this curriculum, but are strongly encouraged.

Specific curriculum requirements are available on the Registration and Records website (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php#requirement-courses-list).

**Minor in Extension Education**

The minor in Extension Education is open to all interested baccalaureate students. The minor is especially appropriate for students enrolled in agricultural, natural resource, and nutrition majors and/or those interested in careers with the Cooperative Extension Service or other nonformal educational/community outreach organizations. Students completing a minor in Extension Education will become familiar with the organization, structure, and mission of Cooperative Extension, the planning and delivery of nonformal educational programs, the management of and leadership of volunteers; communication media and technology; and leadership theory, principles, and skills. The minor requires a minimum of 15 credit hours with 9 credit hours from a required core and 6 credit hours from a list of advised electives. The minimum grade required for all courses counting toward the minor is "C." Additional information related to the minor can be found in the complete listing of minors (https://oucc.dasa.ncsu.edu/undergraduate-academic-programs/academic-minors).

**Minor in Leadership in Agriculture and Life Sciences**

The Leadership in Agriculture and Life Sciences minor is open to all interested baccalaureate students in the College of Agriculture and Life Sciences. The minor is especially appropriate for students enrolled in agricultural and life science majors seeking a competitive edge when applying for supervisory or management positions in careers related to the agriculture and life sciences industries. Students completing this minor will be able to apply the theory, principles and skills required by leaders in their discipline. The minor requires a minimum of 15 credit hours, with 3 credit hours required and the remaining 12 credit hours from a list of leadership courses. The minimum grade required for courses counting toward the minor is a "C-." Additional information related to the minor can be found in the complete listing of minors (https://oucc.dasa.ncsu.edu/undergraduate-academic-programs/academic-minors).

**Certificate in Agricultural Leadership**

The department offers a certificate program in Agricultural Leadership that is available to degree and non-degree students. Students in the certificate program complete a total of 12 credit hours in agricultural leadership courses. Those who complete the leadership certificate program will be better equipped to serve in leadership positions within agricultural industry. In an addition to an introductory leadership course, students can choose from personal leadership, team leadership, organizational leadership, technical writing, or presentation skills. The minimum grade required for courses counting toward the certificate is a "C-.

**Department of Agricultural and Resource Economics**

The Department of Agricultural and Resource Economics serves agricultural, resource and related industries through its extension, research and teaching programs. Applying principles of economics, business, and related disciplines, these programs develop an understanding of contemporary economic and business problems and equip students with knowledge of business organization fundamentals and decision-making skills useful in the operation and management of business firms.

The department offers undergraduate programs leading to a Bachelor of Science degree in Agricultural Business Management (ABM). A concentration in biological sciences and business management (BBM) is offered within the agricultural business management program.

The Agricultural Business Management Program prepares graduates for management, marketing, sales, finance and related careers. The program has sufficient flexibility to provide more extensive course work in basic and applied science and math for those students desiring
to prepare for advanced graduate study as well. The concentration in biological sciences/business management prepares graduates for management, marketing, and sales careers in fields such as biotechnology, pharmaceuticals, health care, environmental protection, food processing and finance dealing with biological issues. This concentration is designed to be an attractive option for students with a strong background and interest in science who seek alternatives to technical science careers.

Specific curriculum requirements are available on the Registration and Records website (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php#requirement-courses-list).

Opportunities

The growing number of specialized business firms producing and marketing services and products in agriculture, resource and life science-related industries has created an increasing demand for graduates trained in agriculture and biological sciences/business management, resource economics and management and environmental policy.

Employment opportunities include careers with companies in purchasing, processing, and marketing food, fiber and related products; firms producing and marketing production inputs (feed, equipment, chemicals, drugs, etc.) and services; banks; other financial and credit agencies; cooperatives; natural resources management units and consulting firms; and natural resources and environmental educational or regulatory agencies.

Many graduates pursue careers in research and education with various state and federal government agencies. These agencies include the Cooperative Extension Service, the Agricultural Research Service, the State Department of Agriculture and Consumer Services, Environmental and Natural Resources, the United States Department of Agriculture, and the Environmental Protection Agency.

Minor in Agricultural Business Management

The Department of Agricultural and Resource Economics offers a minor in Agricultural Business Management. This minor provides students an opportunity to learn basic concepts useful in many careers in agricultural business.

A total of 15 hours of course work is required, including ARE (EC) 201, and four additional courses chosen from a list of selected courses in agricultural and resource economics and related business fields. The ABM minor can be completed through regular courses on campus or through courses offered via Distance Education. Consult the Department of Agricultural and Resource Economics (http://www.ag-econ.ncsu.edu) for specific information on the requirements of the minor.

Department of Animal Science

Animal Science is a broad field centered on the biology, production, management, and care of domestic animals. Throughout history, animals have provided humans with a major source of food, fiber, pleasure, and companionship. Undergraduate students study subjects related to various phases of animal science. Courses are offered in anatomy, physiology, nutrition, genetics, reproduction, and management, and there are opportunities for the application of basic scientific training in animal care and well-being areas. Use of animals and animal specimens is critical to our educational program. To obtain full credit for Animal Science courses, students are required to participate in laboratory procedures involving animals and animal specimens. The Institutional Animal Care and Use Committee (IACUC) approves all activities with live animals. Many lectures also incorporate animals or animal specimens into the course. Animal Science students gain valuable hands-on experience in our on-campus teaching labs as well as at the five nearby teaching farms (horse, small ruminant, swine, beef, dairy).

Opportunities

Animal science graduates are qualified for positions in a wide variety of areas such as research and development at pharmaceutical and biotechnology companies; livestock, horse, or companion animal management; animal breeding and production; feed and animal healthcare product sales and service; livestock marketing; consulting; state and federal departments of agriculture; breed associations; educational and financial institutions; livestock, horse, and companion animal publications and other media; animal technical services; extension services; and public relations. Animal scientists can be found across the nation and around the world in all phases of production, research, sales, service, business, health, and education. Many students in pre-veterinary medicine obtain degrees in animal science, as do other pre-professional students including pre-medical and pre-dental before attending veterinary school, medical school or dental school. Students may elect graduate study, after which they will find opportunities in teaching, research, and extension. Advanced undergraduates have the opportunity to complete the Accelerated Bachelor's/Master's degrees, which allows students to earn both the B.S. and the Master of Animal Science degrees within five years. See listing of graduate degrees offered in the Graduate Catalog (http://www.ncsu.edu/grad/catalog). The Accelerated B.S./DVM for Animal Science Majors (3+1 Advising Guide) is a pathway for students admitted early to a College of Veterinary Medicine to complete the BS in Animal Science degree by transferring back 12 credits after one year in vet school.

Curricula

The degree of Bachelor of Science in Animal Science may be obtained by selecting one of three concentrations offered by the Animal Science Department in the College of Agriculture and Life Sciences. The veterinary bioscience concentration is for students who are interested in advanced study in DVM programs and has all veterinary school prerequisite courses built into the concentration. Students in this concentration must maintain an overall GPA of 3.0 or higher. The science concentration is designed for students with an interest in advanced study, such as MS and PhD programs, in disciplines such as physiology, nutrition, or genetics. This concentration gives students more flexibility to select courses that fit their disciplinary interests. The industry/business concentration is for students who are more interested in the business or production aspects of animal science. It offers flexibility in complementing animal science courses with business, marketing, economics, and applied science course work. There are many opportunities to gain undergraduate research experience with an Animal Science faculty member, to participate in one of the animal-related clubs, and to engage globally by participating in one of our Animal Science Study Abroad experiences.

Specific curriculum requirements are available on the Registration and Records website (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php#requirement-courses-list).
Minor in Animal Science

A minor in Animal Science is open to all interested baccalaureate students who are not majoring in Animal Science. Students completing a minor in Animal Science will become familiar with animal production and its related industries. The minor requires a minimum of 15 credit hours with a grade of “C-” or better, including Introduction to Animal Science, Animal Nutrition, and the student’s choice of Animal Science elective courses. The program is flexible so students may emphasize the discipline or species of their interest.

See the full listing of minors (https://oucc.dasa.ncsu.edu/undergraduate-academic-programs/academic-minors) for more information.

Biological and Agricultural Engineering

The Department of Biological and Agricultural Engineering applies engineering principles to biologically-based systems, primarily in agriculture and the environment. The BAE department provides excellent educational opportunities at the undergraduate level with programs that are well recognized as among the finest in the United States. Two undergraduate curricula are offered:

1. Biological Engineering (BE) and
2. Agricultural and Environmental Technology (AET)

The BE curriculum includes concentrations in agricultural engineering, bioprocess engineering, and environmental engineering. All concentrations within the BE curriculum emphasize core courses in biology, mathematics, physics, chemistry, hydraulics, mechanics, materials, and thermodynamics, which collectively provide solid training in basic science and engineering. The curriculum is designed to prepare each graduate to master fundamentals of engineering and biology, develop the ability to solve engineering problems, improve self-confidence, and apply the creative process of engineering design. The educational experience is capped off with a two semester senior level course that immerses each graduate in the team approach to developing engineering solutions to complex problems. By the time of graduation, approximately 80% of BE graduates will have passed the Fundamentals in Engineering exam and thus be well on their way toward licensure as a Professional Engineer.

The AET combines an understanding of agricultural, biological, and physical sciences with technology and economics so that the focus is on applying engineering principles to agricultural and environmental systems. Graduates are prepared to apply and manage the use of technical tools in production agricultural and environmental issues, or in other industries interfacing with natural resources or agriculture. The AET graduates provide a critical link in the agricultural and environmental spectrum by interacting directly with the production personnel as well as designers, implementers and managers of technological systems.

Opportunities

BE students learn to solve a wide variety of engineering problems and will have opportunities for specialization through selection of a specific concentration. Scientific and engineering principles are applied: to conserve and manage air, energy, soil and water resources; to manage, protect and restore natural ecosystems; to understand and utilize biological, chemical and physical processes for the production and conversion of biomass to bio energy; to analyze, understand and utilize mechanical properties of biological materials; to design and develop machinery systems for all phases of agricultural and food production; to design and evaluate structures and environmental control systems for housing animals, plant growth, and biological product storage; to develop improved systems for processing and marketing food and agricultural products; and to design sensor-based instrumentation and control systems for biological and agricultural applications.

Graduates of the BE curriculum receive a “B.S. in Biological Engineering,” qualifying them for positions in design, development, and research in industry, government and public institutions. The curriculum also prepares students for post-graduate work leading to advanced degrees. Typical positions filled by recent BE graduates include: stream and wetlands restoration project manager; product design; development and testing engineer; plant engineering and management; engineering analysis and inspection for federal and state agencies; engineering consultant and research engineer. Entry-level salary ranges for BE graduates are similar to those of Civil, Industrial, and Mechanical Engineering graduates.

The AET curriculum provides graduates opportunities in technical analysis, application and evaluation of agricultural production systems and environmental systems. The curriculum’s flexibility enables students to specialize technologically in agriculture, the environment, or business management. Careers include technical jobs in production agriculture, environmental systems, agribusiness sales and service, and agricultural extension.

Curricula

The BE curriculum is jointly administered by the College of Agriculture and Life Sciences and the College of Engineering and combines the fields of engineering, biology and agriculture. The BE curriculum is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org. BE graduates are qualified to become registered professional engineers by passing the appropriate examinations and upon completing the engineering experience requirements. Specific curriculum requirements are available online.

The BAE faculty, in concert with program constituencies, has developed the following undergraduate program objectives. Within the first five years following graduation, NC State’s Biological Engineering graduates will:

- Excel in their careers or in graduate school by applying their knowledge of engineering principles, processes, and procedures;
- Practice engineering professionally and ethically;
- Communicate effectively in a professional environment; and
- Be engaged in life-long learning and professional development.

The AET curriculum is administered by the College of Agriculture and Life Sciences and is intended to uniquely prepare students for hands-on application of technology to efficiently manage agricultural and environmental systems. Flexibility within the program allows students to attain depth in science, business, or environmental areas. Graduates provide a critical link in the agricultural and environmental spectrum by interacting directly with both production personnel as well as the designers and implementers of technological systems.

The program objectives of the Agricultural and Environmental Technology (AET) Bachelor of Science (B.S.) degree are to:

- Develop technical knowledge of physical and biological sciences used in agricultural and environmental systems;
• Apply critical thinking, existing technology and practical approaches to solve problems in agricultural and environmental systems;
• Produce technologists able to work in teams and effectively communicate to audiences; and
• Develop in students an appreciation for life-long education that supports their careers.

Minor in Agricultural and Environmental Technology
A minor is offered to students interested in the application of engineering technology analysis in agricultural and environmental systems that utilize machinery, agricultural structures, food and feed processing, soil, water and waste management, electrical power and controls, and agricultural safety and health technology. This minor is not open to AET majors and allows majors in other programs to understand engineering technology for equipment, materials, resources, processes, and facilities utilized in their major area of study, and be knowledgeable in the application of technology for managing environmental issues, impacts, and monitoring.

Department of Crop and Soil Sciences
We roll up our sleeves and get our hands dirty to accomplish great things in the Department of Crop and Soil Sciences. Our world-class undergraduate programs prepare students to answer environmental and agricultural challenges, building on our rich history of growing agricultural and environmental sciences in North Carolina and around the globe. But our focus is on the future, because the solutions for feeding a growing population, conserving natural resources and dealing with climate change are rooted in crop and soil sciences.

We conduct research that drives innovation and new technology, expands understanding and provides science-based information to solve problems, but we don’t stop there. We make sure our graduates, stakeholders and partners put their gained knowledge and innovation to work for a better tomorrow.

Dig in and learn more about us at go.ncsu.edu/CropAndSoil. See how we can help you achieve your goals.

Career Opportunities
The breadth and depth of education and experiences you will gain from our department will set you on a path toward a rewarding career in one of the following specialties:
• Agronomist
• Agronomy Sales and Management
• Athletic Turf Manager
• Crop Advisor
• Conservationist
• Crops Systems Specialist
• Ecologist
• Environmental Scientist and Specialist
• Extension Agent
• Golf Course Superintendent
• Hydrologist
• Nutrient Management/ Waste Management Specialist
• Plant Breeder
• Precision Agriculture Specialist
• Real Estate Manager
• Research Station Manager
• Restoration Specialist
• Seed Production Agronomist
• Soil Scientist

Learn more about future job prospects, representative salaries, and major employers for each of the above listed careers at go.ncsu.edu/careers

Educational Opportunities
In the Department of Crop and Soil Sciences, we teach students to be stewards of our natural resources and effective managers of land. Whether your interest is in sustainable agriculture, crop biotechnology, agronomic business, land development, turfgrass management or wetland science, we have a degree that is perfect for you. Whether you are interested in a Bachelor of Science degree, an associate degree, an undergraduate certificate or a minor, we have a program that will start you on your way toward a rewarding career.

Bachelor of Science
We offer eleven academic concentrations spanning four Bachelor of Science degrees.

Bachelor of Science in Plant and Soil Sciences degree is a flexible program that allows students to choose from a wide range of programs, based on their personal interests and career goals. Students can select a concentration from six areas of study including Agroecology, Agronomic Business, Agronomic Science, Crop Biotechnology, Crop Production, and Soil Science. Each concentration provides a strong science-based foundation as well as technical and supporting courses related to each individual discipline.

Bachelor of Science in Soil and Land Development degree prepares students for careers in the real estate industry. It offers the business-oriented Land Development concentration as well as the science-oriented Soil Science Concentration. Students completing a degree in Soil and Land Development can use their knowledge of business and science to make land use decisions that are both economically and environmentally sound.

Bachelor of Science in Turfgrass Science degree has been voted #1 in the US by TurfNet Magazine. Why? Because we have the best turfgrass scientists and extension specialists teaching our classes, because we have a state of the art teaching field lab for hands-on learning, and because our program has classes that cover the basics of environmentally sound turfgrass management. Our graduates find great careers in golf course and athletic field management, home and industrial lawn businesses, sod production, recreational park turf management, agri-business management and agri-business sales.

Bachelor of Science in Natural Resources degree encompasses the study of soil, water, air, minerals, flora, fauna and people. This curriculum offers a broad base in resource management with an opportunity to select one of several specializations. Two of these specifically address soil science: Soil Resources and Soil and Water Systems. The soil resource concentration prepares students to understand basic soil properties and to relate soil capabilities to a broad spectrum of land uses. The soil and water systems concentration integrates the role of soil with the importance of surface and groundwater hydrology.
Learn more about our Bachelor of Science degrees at go.ncsu.edu/degrees

**Associate Degrees**

**Associate of Applied Science Field Crop Technology**
The world’s population is growing and our farmland is shrinking. So how are we going to feed and clothe everyone? How are we going to provide enough grain for food, fuel and feed? North Carolina and the world need professionals trained in the production and management of food, feed, fiber and fuel crops and that is just what the Field Crops Technology program does. The Field Crops Technology curriculum provides a basic understanding of how field crops grow, how yield is influenced by management decisions, how proper soil management enhances farm profits, and how farm profits are tied to marketing decisions. We provide a curriculum that gives students an understanding of how they can reduce farm inputs and at the same time maximize crop yields, while protecting the environment and natural resources around them. The strength of our program lies in our teachers. Commodity and production courses are taught by Crop and Soil Sciences Extension Specialists. These faculty members are the same ones who conduct applied research and on-farm tests, and provide production information across the state. This gives students a chance to learn the most recent recommendations directly from the experts.

**Associate of Applied Science Turfgrass Management**
Students who have an appreciation for working outdoors or the challenge of creating and maintaining beautiful surroundings may be interested in a career in Turfgrass Management. Turfgrass managers establish and maintain grasses for functional (erosion control), recreational and ornamental purposes. They manage people and budgets, and use their knowledge of plants and soils to produce high-quality, visually appealing turfgrass areas. There are ample employment opportunities for well-trained managers in this industry.

Learn more about our associate degrees at go.ncsu.edu/associate-degrees

**Undergraduate Minors**

We offer four different minors: Crop Science, Soil Science, Turfgrass Science and Agroecology. Each offers students the opportunity to specialize in areas of personal interest.

**Agroecology Minor**
Agroecology is the science behind sustainable agriculture, linking social, environmental and economic perspectives in agriculture. Students completing this program gain understanding of sustainable agricultural systems from local and global farming examples, obtain new skills in analyzing agricultural systems from a multidisciplinary, integrated approach to developing creative and sustainable solutions for food systems, and enhance their ability to obtain new and diverse sustainable careers in food and agricultural systems. The Agroecology minor is open to all baccalaureate students. It is designed for students majoring in Biological Sciences, Plant & Soil Sciences, Horticultural Science and Animal Science, but is of interest to a wide array of students, as agriculture has broad implications in the life sciences, economics and sociology.

**Crop Science Minor**
This minor is a great selection for students majoring in Agricultural Business Management, Agriculture and Extension Education, Agricultural Sciences and Environmental Sciences. The required and elective courses provide a strong background in crop science for the variety of disciplines which interact in some way with field crop production. Classes are designed to clarify the role that crop species and rotational sequences play in the agricultural enterprises (United States and global) which improve our quality of life. They also identify strategies that are in use or being researched which will increase crop species/environment compatibility in order to achieve yield stability, suitable quality of product, and sustainability of the production enterprise. The minor is open to all baccalaureate students except those majoring in Plant and Soil Sciences.

**Soil Science Minor**
The minor in Soil Science is offered to students desiring a strong knowledge of the principles of soil science to complement their major. It is intended to strengthen the understanding of basic physical, chemical, and microbiological soil properties that would be relevant to a student’s particular land management interest. These interests may include (but are not limited to) Forestry, Geology, Natural Resources, Environmental Science, Plant and Soil Sciences, Landscape Architecture, Horticulture, Biological and Agricultural Engineering, Agricultural Business Management, or Agricultural Education.

**Turfgrass Science Minor**
Turfgrass Science is a great minor for students in Horticultural Science, Parks and Recreation, and Agricultural Business Management. Students enrolled in this program learn to identify and select commonly used turfgrasses for most appropriate use in various environments including golf courses, athletic fields, home lawns, sod production and highway roadsides. They also design management programs which optimize the performance of turfgrass species for a particular use while minimizing potential adverse environmental impacts, and apply knowledge of turfgrass systems to solve practical establishment and maintenance challenges in their career activities. The minor is open to all baccalaureate students except those majoring in Turfgrass Science.

Learn more about our undergraduate minors at go.ncsu.edu/minors

**Undergraduate Certificates**

Interested in returning to school to continue your education as a non-degree studies student? We offer two undergraduate certificate programs that allows participants to focus their attention on the core courses of our undergraduate degree programs. Both the Crop Science Certificate and Soil Science Certificate can be completed through distance education (online).

Learn more about our distance education programs at go.ncsu.edu/online-programs

**For Additional Information**

If you need additional information, or have questions about the undergraduate programs in the Department of Crop and Soil Sciences, you can contact the Undergraduate Programs Office at 919.515.5820 or by email at cropsoc-undergraduate-office@ncsu.edu

**Department of Entomology and Plant Pathology**

As of July 1, 2016, the Department of Entomology has merged with the Department of Plant Pathology to become the Department of Entomology and Plant Pathology. The information listed below is for the Department of Entomology. Click here for information on Plant Pathology (p. 59).

Undergraduate instruction in entomology provides introductory and advanced courses in the basic science of entomology and the
management of beneficial and pest insects. Courses at the 200- and 400-level fulfill General Education Requirements in Natural Sciences or Science and Technology and serve students majoring in biological sciences, agronomy, horticultural science, agricultural education, crop science, forestry and plant biology. They also provide fundamental training for graduate study in entomology (see the Graduate Catalog [http://www.ncsu.edu/grad/catalog]).

Opportunities

For graduates with advanced degrees in entomology, opportunities include research, teaching, and extension positions in colleges and universities; research, development, production, control, and sales positions in private industries; consultative positions in pest management; research and regulatory positions with state and federal agencies; and curatorial positions in museums.

Curricula

There is no undergraduate major in entomology. Those students with a primary interest in entomology are advised to choose a general biological science curricula and minor in entomology.

Minor in Entomology

The Department of Entomology offers an undergraduate minor available to all baccalaureate degree students at North Carolina State University. The minor is especially appropriate for (but not limited to) students interested in biological or agricultural sciences, veterinary medicine, or other health sciences. A basic knowledge of insect biology may also be useful to students seeking careers in government, industry, or education.

The minor consists of a minimum of 15 credit hours, including one core course (ENT 402 or ENT 425). The remaining hours can be selected from a group of restricted electives.

Department of Food, Bioprocessing and Nutrition Science

The Department of Food, Bioprocessing and Nutrition Sciences offers three undergraduate degree programs:

1. Food Science
2. Bioprocessing Science
3. Nutrition Science

These programs focus on the application and integration of chemistry, biology, biochemistry, biotechnology, and engineering disciplines in the development, production, and delivery of safe and nutritious foods and other products (including drugs) from food and bioprocessing operations, in addition to understanding the role of diet and how it generally affects human health. In support of each program, the department maintains modern, fully-equipped laboratories and a host of Nutrition outreach opportunities for teaching and research. All three undergraduate programs are compatible with pre-professional school curricula, such as pre-med or pre-vet, and many students elect to take on a minor in an area that enhances their major coursework. There are also opportunities to double major both within departmental majors as well as external majors such as Biochemistry.

Opportunities

Consumer demand for safe, high quality, nutritious foods and biopharmaceutical products, as well as for educational programs designed to promote healthy eating, creates a variety of career opportunities in the food, pharmaceutical and the allied health industries. Industrial opportunities include management, research and development, process supervision, quality control and assurance, procurement, distribution, and sales. Public health opportunities include educational program development, delivery, and assessment. In addition, graduates hold positions with government agencies and many with advanced degrees have teaching and/or research positions in colleges and universities.

Food Science

Many career opportunities exist in the food and beverage industry, the world’s largest manufacturing sector, for graduates with a Food Science degree. Food science professionals are involved in the discovery of new food sources, new methods of food preservation, advances in food chemistry and sensory science and even product development. Positions are found worldwide, providing technical support to the food, beverage, and pharmaceutical industries and also government agencies. Food scientists work to ensure the safety and quality of foods through the application of basic scientific principles. The demand for food scientists continues to increase as the food industry expands.

Bioprocessing Science

The Bioprocessing Science degree is a unique program designed to provide graduates with a special skill set specific to bioprocessing and biomanufacturing. Graduates from this degree program will have exciting opportunities to biomanufacture medicines, vaccines, enzymes and other products that improve the quality of life.

Nutrition Sciences

Jobs for those with training in Nutrition Science are increasing due to the growing and aging population, public interest, especially related to obesity and chronic disease risk, and a desire to develop nutritious products for a health conscious consumer. Nutrition scientists may be employed in a variety of settings including clinical or private practice, health management organizations, wellness centers, health-related government agencies or non-profit organizations, and the food industry. Because of the key role that diet plays in the prevention, development, and treatment of many major diseases, health professionals benefit from an understanding of nutrition. Therefore, a degree in Nutrition Science is also highly relevant for those desiring a career in an allied health field.

Scholarships

The department provides both merit and financial need scholarships to encourage and assist students preparing for careers in Food, Bioprocessing, or Nutrition Science.

Curricula

The Food Science Bachelor of Science degree is offered through two curricula emphasizing science or technology. The science curriculum is designed for students desiring a more analytically intense program leading to technical careers in the food industry or graduate school. Students with an interest in business opportunities will find the technology program permits greater flexibility to pursue coursework in business, agricultural economics, or related fields.
The Bioprocessing Science Bachelor of Science degree prepares students for technical careers in biomanufacturing through formal training in fundamental sciences, as well as preparing students for careers in industries whose products are based on biological systems, including biopharmaceutical and biotechnology companies.

The Nutrition Science Bachelor of Science degree has two sub-plans to choose from: the Science track or the Applied track. The Science curriculum is designed for those students with an interest in graduate school or post-graduate training in a human health profession for which physics and 4 semesters of chemistry are required. The Applied curriculum is designed for those interested in health-related jobs immediately after graduation, obtaining further training to become a Registered Dietitian after graduation, or going on for post-graduate training in a human health profession for which no physics courses and only 3 semesters of chemistry are required.

**Minor in Food Science**

The Food Science Minor is designed to provide students with important food science principles and concepts, giving a competitive edge to individuals seeking employment in the food, pharmaceutical and related industries. A minor provides technical information to improve the student’s knowledge and understanding of food and its manufacture. While a comprehensive coverage of Food Science cannot be accomplished in 15 credit hours, flexibility in developing the minor permits tailoring each program to complement a student’s major. An introductory course (FS 201) is required, but other courses are selected to build on the student’s major.

**Minor in Nutrition**

A Nutrition Science minor is designed to provide knowledge of the principles of nutrition associated with healthful diets and to apply an understanding of nutrient structure, function, and sources to the evaluation of information and policies concerning foods and dietary and/or feeding practices. Introductory Biochemistry is a required course; students then select an additional 12 credit hours from a list of 200-500 level classes, including on- and off-campus independent study or research experiences.

Specific curriculum requirements are available on the Registration and Records website (https://www.acs.ncsu.edu/php/coursecat/ degree_requirements.php#requirement-courses-list).

**Department of Horticultural Science**

Horticulture is a dynamic segment of agriculture. The development, growth, distribution, and utilization of fruits, vegetables, flowers, and ornamental plants, plus the art and science of landscape designing enrich our lives with nutritious foods and more attractive surroundings. North Carolina’s varied climatic conditions favor the production of a wide variety of horticultural crops on a commercial scale, as well as numerous beautiful parks, gardens, and arboreta. The growing interest in local foods and home gardening has created a demand for more information about fruits and vegetable production and new crop varieties adapted to North Carolina’s environments. Urban population growth fuels a need for ornamental plants and a thriving nursery industry. Designers skilled in residential and commercial landscaping, interior plantscaping, and plant maintenance are in high demand. The growth in demand for horticultural information by the consumer, schools, and state and county government continues to increase.

Undergraduate programs in horticultural science offer a broad based education in physical and biological sciences and a sound production background. Students can concentrate in areas of fruit and vegetable science, floriculture, woody ornamental plant science, landscape design, or pursue a general approach encompassing all the specialties. They are prepared for graduate study or for diverse professional service.

**Opportunities**

Horticulture graduates fill positions in production, processing, sales, service, and outreach. Among these are:

- county extension agents
- vocational agriculture teachers
- landscape designers and landscape contractors
- farm operators
- orchard
- nursery
- greenhouse
- and garden center managers
- research
- production
- and promotional specialists with commercial seed
- fertilizer
- chemical and food companies
- urban horticulture specialists
- garden writers
- inspectors
- quality control technologists
- USDA specialists
- county and state government planners
- leaders in other phases of agricultural and industrial developments
- Students also prepare for careers in research, teaching or extension in horticulture

**Curricula**

The degree of Bachelor of Science with a major in horticultural science can be earned in either science or technology. Under the science curriculum, specialized education is offered in fruit and vegetable crops, floriculture, and ornamental horticulture. Under the technology curriculum, education is offered in landscape design or in a general approach, which allows for specialization in fruit and vegetable science, floriculture, and woody ornamental plant science.

Specific curriculum requirements are available on the Registration and Records website (https://www.acs.ncsu.edu/php/coursecat/ degree_requirements.php#requirement-courses-list).

**Minor in Horticultural Science**

The academic minor in Horticultural Science is offered to students who desire a strong foundation in the principles of horticultural science. Students may choose to enhance their own major by selecting courses in a specialized area of horticulture such as fruits and vegetables, ornamentals, floriculture, or landscape horticulture, or they may pursue a
more general approach to the entire field of study. Sixteen or seventeen credit hours are required for the minor, depending on courses selected.

Certificate in Horticultural Science

The undergraduate certificate in Horticulture provides a basic introduction into the science of Horticulture and Horticultural practices as they pertain to the home garden. A broad-range of courses are available in a distance education format. A minimum of fifteen credits is required for the certificate.

Department of Molecular and Structural Biochemistry

Biochemistry is the science which is concerned with the discovery and understanding of the chemical principles of life. It is a wide-ranging field from the composition, biosynthesis, structure and function of biomolecules to the control and regulation of biochemical processes within organelles, cells, organs and organisms. Biochemical principles form the basis of most laboratory procedures within the life cycle.

Opportunities

The Biochemistry program provides B.S. graduates with the scientific background and skills required for employment in biochemistry, molecular biology, biotechnology, and genetics and for the health professions of medicine, dentistry, veterinary medicine, pharmacology and related fields.

Awards

The H. Robert Horton Award is given to the outstanding student in Biochemistry based on scholarly and research achievements.

Honors

The honors program in Biochemistry is jointly administered within the College of Agriculture and Life Sciences and the College of Sciences. It is designed for students who wish to explore advanced courses and be rewarded for outstanding academic achievement.

To be admitted to the honors program, a student must complete the three-semester sequence of Calculus (MA 141, MA 241, MA 242) and the calculus based Physics sequence (PY 205 and PY 208). Exceptions can be made for transfer students. Students with a GPA of at least 3.5 are invited into the program in their junior year. To complete the program, a student must take two semesters of Physical Chemistry sequence (CH 431 and CH 433), at least three hours of research and six hours of advanced or honors courses at the 300- or 400-level. Interested students should contact one of the Undergraduate Coordinators of Biochemistry for more detailed information.

Curricula

The curriculum emphasizes the fundamentals of biological and physical sciences, offering students both breadth of knowledge and depth of understanding. It is designed to provide students with broad experience in biological and chemical sciences and to encourage the development of experimental skills. One important aspect is the requirement of at least one semester experience in a Biochemistry laboratory. Because of the breadth of the course requirements, many students can easily add a second major in Biological Sciences, Chemistry, or other science as well as add a minor in Genetics.

Specific curriculum requirements are available on the Registration and Records website (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php#requirement-courses-list).

Department of Plant and Microbial Biology

The instructional program in Plant Biology provides classroom, laboratory, and field experience in the fundamental areas of the plant sciences. Undergraduates majoring in plant biology select major courses that are tailored to their interests within the discipline and are required to have a supervised research or teaching experience that allows them to work closely with departmental faculty. Majors, as pre-professionals in the plant sciences, are prepared for advanced study in plant biology and other biological fields, as well as in the applied plant sciences, such as horticulture, crop science, plant pathology, natural resource management, and conservation.

Opportunities

The undergraduate degree is an excellent pre-professional degree in the plant sciences. Graduates are employed as researchers in academic, government, or industrial labs, as field botanists and conservationists in state and natural parks, and as employees of environmental education, or public service organizations. Many majors continue with graduate studies in a plant science discipline, after which they are qualified for teaching positions in community colleges, prominent colleges and universities, for research positions in major federal and state government laboratories, and in private industry. Research technician positions in many life science areas in governmental and industrial laboratories are also career possibilities. The field of plant biotechnology provides additional opportunities with several graduates seeking employment in the biotechnology industry including companies in nearby Research Triangle Park. Graduates are also well qualified for professional training in the health professions.

Curricula

The Bachelor of Science degree with a major in Plant Biology is offered under the science curriculum of the College of Agriculture and Life Sciences. Students can choose to pursue a general major with courses in different areas of Plant Biology, or can specialize their study in one of the following areas: Ethnobotany; Plant Biotechnology and Molecular Biology, and Plant Systematics and Ecology. The Bachelor of Science in Plant Biology with a double major in another life science or applied plant science is possible, as is a double major in a humanities and social sciences discipline (anthropology, English, history, philosophy, psychology, or political science). Selected faculty in Plant and Microbial Biology also work with the Biological Sciences faculty in the College of Sciences to offer the B.S. degree in Microbiology, details about which are located at: http://next-catalog.ncsu.edu/undergraduate/collegeofsciences/biology

Minor in Plant Biology

The minor in Plant Biology is available to all degree-seeking students at NC State University who are not enrolled in the plant biology major. The minor requires 15 hours comprised of a 4 credit hour introductory course (PB 200 or PB 250) and 11 hours of plant biology elective coursework. Up to 4 credit hours of special topics or special problems courses can be used to meet the elective hour requirements.
Minor in Biotechnology

The Minor in Biotechnology provides first-hand laboratory experience with a variety of technologies that use gene manipulation, recombinant organisms, or cell culture. The laboratory courses typically are started in the junior year, following completion of BIO 183 and Organic Chemistry (CH 223) with a grade of C- or better. BIT 410, "Manipulation of Recombinant DNA" is required for all students but BCH 454 can be substituted. Other requirements for the minor include a 3 credit research internship, 4 credits of advanced biotechnology laboratory courses, and a biotechnology ethics course. Interested students should visit the website http://biotech.ncsu.edu/, or contact Dr. Laura Ott at leneuder@ncsu.edu for more information.

Department of Entomology and Plant Pathology

As of July 1, 2016, the Department of Plant Pathology has merged with the Department of Entomology to become the Department of Entomology and Plant Pathology. The information below is for the Department of Plant Pathology. Click here for information on Entomology (p. 55).

Plant Pathology is a diverse discipline that provides fundamentally important information to many of the undergraduate degree programs offered in CALS at NC State. Undergraduate instruction in plant pathology provides introductory and advanced courses on the biology of plant pathogens and the nature and control of plant diseases to students majoring in crop science, horticultural science, the life sciences, and forestry. It also provides the fundamental training necessary for graduate study in plant pathology and related fields.

Kelman Scholars

Thanks to the generosity of Dr. Arthur and Mrs. Helen Kelman, family and friends, the department offers the S.E. Kelman Memorial Scholarship to one or more outstanding undergraduates enrolled at NC State or other universities. This competitive program allows selected applicants to gain research experiences as interns working under the supervision of a faculty member in the Department of Plant Pathology. For details about this scholarship program, please see scholarship's information page (https://plantpath.cals.ncsu.edu/undergraduate-studies/summer-research).

Curricula

There is no undergraduate major or minor in plant pathology. We co-direct with the Department of Entomology a certificate in Plant Pests, Pathogens, and People (https://oucc.dasa.ncsu.edu/plant-pests-pathogens-and-people), which offers a course of study in the biology, ecology, economic significance, and management of plant diseases and insects. This program may be completed on-campus or totally online.

Opportunities

As a graduate department, our graduates, with advanced degrees in plant pathology, are competitive for employment in many areas. Employment opportunities at the M.S. and Ph.D. levels include research, extension, teaching and regulatory sciences with universities and colleges, the U.S. Department of Agriculture, including APHIS and CPHIST, a wide array of agriculturally related industry, and private consulting. The rapid development of biotechnology, regulatory sciences, agricultural chemicals and biocontrol offers numerous opportunities for exciting and rewarding careers that service societal needs and advance our sciences.

Prestige Department of Poultry Science

The Prestige Department of Poultry Science provides instruction in the principles of vertically integrated poultry production and in such related disciplines as nutrition, physiology, genetics, immunology, toxicology, biotechnology, and general poultry management. Through teaching, research, and extension, the department serves students, poultry producers, and allied industries. Poultry production has increased rapidly during the last two decades and ranks first in North Carolina as a source of agricultural income. North Carolina currently ranks second (http://www.ncagr.gov/stats/crops/Ranking.pdf) nationally in the production of poultry products. Growing demand for poultry products, our climate and economic conditions in the state provide a sound base for continued expansion.

Opportunities

The transition from small farm operations to large commercial poultry enterprises has created more specialized positions than there are available poultry graduates. Production-oriented positions and off-the-farm operations in areas such as processing and distribution offer new job opportunities. The allied industries—feed, equipment, financing, pharmaceutical and other supplies—need additional employees trained in Poultry Science. Graduates hold positions as managers and field representatives for business identified with or serving the poultry industry. Graduates are also employed in the communication and public relations sectors, as teachers, and extension and research specialists. Some graduates develop their own poultry businesses.

Curricula

Students desiring a Bachelor of Science degree with a major in Poultry Science may choose either the science or technology curriculum offered by the Prestige Department of Poultry Science. One may obtain a double major in other curricula through careful use of electives and/or summer school attendance. These students should consult the undergraduate advisers in the department(s) concerned. Currently, the pre-veterinary science student may obtain all requirements toward a Bachelor of Science degree in the science option. The science curriculum reflects a student's interest in the basic biological and physical sciences. These students are better prepared for advanced study in various disciplines such as genetics, nutrition, physiology, and pathology. Several pre-veterinary students are currently enrolled in this curriculum and are seeking a Bachelor of Science degree in Poultry Science. (See the Pre-professional Program in Veterinary Medicine).

The technology curriculum in Poultry Science is designed to prepare students for direct entry into the poultry industry upon graduation. It allows a greater selection of courses in business and economics; and offers a student both basic and applied knowledge in poultry production which can be utilized in a poultry operation upon graduation.

Specific curriculum requirements are available on the Registration and Records website (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php#requirement-courses-list).
Minor in Poultry Science

A minor in Poultry Science is open to all interested baccalaureate students who are not majoring in Poultry Science. This minor is appropriate for (but not limited to) students majoring in Agricultural Business Management, Agricultural Economics, Agricultural Education, Agricultural Science, Agronomy, Animal Science, Biological Science, Food Science, Nutritional Science, Poultry Science and Zoology. Students completing a minor in Poultry Science will become familiar with poultry production and with its related industries. The minor requires a minimum of 15 credit hours with a grade of "C-" or better. The program is flexible so that students may emphasize the discipline or species of their interest.

See the complete listing of minors (https://oucc.dasa.ncsu.edu/undergraduate-academic-programs/academic-minors) for more information.

Minor in Feed Milling

This minor is appropriate for (but not limited to) students majoring in Agricultural Business Management, Agricultural Economics, Agricultural Education, Agricultural Science, Agronomy, Animal Science, Biological Science, Food Science, Nutritional Science, Poultry Science and Zoology. Students completing a minor in Feed Mill Science will become familiar with the feed milling process and with its related industries. The minor requires a minimum of 15 credit hours with a grade of "C-" or better. The program is flexible so that students may emphasize the discipline or species of their interest.

See the complete listing of minors (https://oucc.dasa.ncsu.edu/undergraduate-academic-programs/academic-minors) for more information.

North Carolina Agricultural Research Service (NCARS)

The North Carolina Agricultural Research Service (NCARS) is the research function of the College of Agriculture and Life Sciences. Research programs range from fundamental to applied in support of agriculture, the environment, as well as health and well being. Forestry research is a jointly conducted program between NCARS and the College of Natural Resources. NCARS is funded principally by appropriations from the North Carolina General Assembly, federal formula funds, grants and contracts.

Our Mission

The mission of NCARS is to develop the knowledge and technology needed to:

- Improve productivity, profitability and sustainability of industries in agriculture and the life sciences;
- Conserve and improve the state's natural resources and environment;
- Improve the health, well being and quality of life of North Carolina's citizens;
- Provide the science base for research and extension programs.

Many research faculty in NCARS have joint appointments in teaching or extension. In classroom and informal teaching functions, our research scientists develop and teach quality science-based curricula in the fields of agriculture, biology, social sciences and the environment. Our faculty also contribute to the graduate training of students destined to become leaders, teachers, and scientists who will help sustain viable agriculture and life science industries.

Publications

NCARS publishes bulletins and scientific papers on research solutions to problems and opportunities that will benefit citizens, businesses and communities. Copies of technical bulletins may be obtained from the Department of Communication Services Customer Service at (919) 513-3045 and scientific papers from authors.

Services

The faculty of NCARS conducts research, which has a direct impact on the agriculture and life science industries in North Carolina. This research includes field and laboratory experimentation in the agricultural, biological, physical, social, and environmental sciences. Primary emphases are devoted to two areas: 1) the production, processing, distribution, and consumption of the many agricultural and forestry commodities and products produced throughout the State and 2) developing and marketing life-science based processes and technologies. Together, these two research areas help improve the quality of life of both rural and urban citizens.

North Carolina Cooperative Extension Service

Patterson Hall, Room 120
Phone: (919) 515-2813

The NC Cooperative Extension Service at NC State University is part of a national Extension network that transforms the research knowledge of the university system into practical learning experiences and opportunities for all residents of NC to improve their lives. Client’s value Cooperative Extension based on our proven ability to help people improve their lives though their personal application of the new knowledge they learn. Dedicated staff are committed to finding the best unbiased information and then helping individuals one-on-one or creating educational programs to help solve real problems and address relevant issues. Respect for individual needs and the belief that education can improve lives has built a strong and respected relationship throughout the state and nation.

The NC Cooperative Extension Service partners with County Governments and the Eastern Band of Cherokee Indian Tribal leadership to provide locally based Agents with the skills and passion to provide the education and hands-on training needed to impact local issues. Agents use advisory councils of local residents to identify key issues and concerns in their families, businesses, and communities. Once key issues are identified, agents develop educational programs and appropriate teaching and experiential learning methodologies to help targeted audiences learn what they can do to improve their practices, behaviors and lives. Outcomes and impacts of these programs are determined through evaluations to ensure public trust and accountability of resources provided.

North Carolina Cooperative Extension Service key areas of educational expertise include: Strengthening the economic and environmental vitality of NC food, feed, fiber and forest systems and ornamental plant based industries; Family health and nutrition; Positive youth development and leadership (4-H); and Community Development.
Agricultural Institute

100 Patterson Hall
NCSU Box 7642
Raleigh, NC 27695-7642
Phone: (919) 515-3248
Fax: (919) 513-1421
e-mail: ag_institute@ncsu.edu
Visit the AGI website (http://harvest.cals.ncsu.edu/agu)ntitude

Modern-day society depends heavily on the abilities of highly trained people for its success. It would be impossible for a single individual to be a nutritionist, a plant and animal disease specialist, a mechanic, or a management expert all combined into one. These are only a few of the skills that make up the highly technical, rapidly advancing field we know as agriculture today.

The Agricultural Institute was organized by North Carolina State University in the fall of 1959 to meet the ever-increasing demand for technically trained people in agriculture and related fields. It is a two-year program that awards the Associate of Applied Science Degree upon successful completion of at least one of the curricula. Provision for the Agricultural Institute was made by the 1959 North Carolina General Assembly.

Instructional programs of the Agricultural Institute are organized and conducted as a part of the overall program in the College of Agriculture and Life Sciences. The Agricultural Institute is an addition to and not a substitute for the bachelor of science degree-granting program of the College of Agriculture and Life Sciences. However, faculty for the four-year program are responsible for organizing and teaching courses offered by the Agricultural Institute. The Institute uses the same facilities (classrooms, laboratories, farms) as the four-year program. Facilities are available for both teaching and observing how technology is applied in agriculture and other areas.

People with the kind of training offered by the Agricultural Institute are in demand in North Carolina and the nation. By adding new courses of study to keep up with rapidly changing technology, the Agricultural Institute strives constantly to meet the needs of its students. In doing so, it prepares them to be highly trained candidates for careers in agribusiness, agriculture, pest management, ornamentals, landscape, turfgrass, and other related areas.

Agricultural sciences and related areas are challenging businesses that continue to grow more complex every day. The scientific age in which we live has given an entirely different meaning to what we knew as agriculture a half century ago.

College of Design

NCSU Box 7701
Raleigh, NC 27695-7701

Now in its sixth decade, the College of Design at North Carolina State University has from the beginning prepared designers who, in the broadest sense, shape the world. Design education is more than an attempt to teach a set of technical skills. The environment— including the spaces in which people live and work, the products they consume, and the messages they receive— have a powerful impact on how humans function as a society. Good design, therefore, requires attention and sensitivity to social, economic, political, cultural, and behavioral issues.

The aim of the curricula in the College of Design is to develop the designer’s perception, knowledge, skills, and problem-solving abilities.

The College of Design admits students through a selective process that ensures a highly motivated and heterogeneous design community. The entering student body consistently ranks at the top of academic achievement in the university and the college graduation rates are the highest in the institution. While providing undergraduate and graduate study in multiple disciplines and encouraging individual plans of study, the college functions as a unified, interactive education center, dedicated to preparing designers capable of shaping the environment to various scales in response to society’s needs.

The First Year Experience

Students enter the College of Design into one of five majors: Architecture, Art + Design, Graphic Design, Industrial Design, and Design Studies (non-studio based major). The first year experience centers on courses that are populated with a mix of students from the five disciplines. They include introductions to the design process, a design vocabulary, and fundamental principles of designing. Project activities include hands-on work, discussions, demonstrations, critiques, and occasional field trips. Emphasis is on interaction, independence, self-discipline and self-motivation.

In both semesters, the first year experience emphasizes learning how to use the design process, establishing disciplined work habits, communicating about design, using studio design vocabulary, and working in collaboration with others, thus forming the foundation for all subsequent design activity in the college and later in the professions.

Curricula and Degrees

The College of Design offers undergraduate instruction leading to the four-year Bachelor of Environmental Design in Architecture, Bachelor of Art + Design, Bachelor of Graphic Design, Bachelor of Industrial Design, Bachelor of Arts in Design Studies (non-studio based), as well as a one-year postgraduate program leading to the Bachelor of Architecture. The General Education component of each curriculum consists of courses in mathematical and natural sciences, physical education, science/technology/society, and communication and information technology. In addition to 6-credit hour design studios (not applicable to Bachelor of Arts in Design Studies, a non-studio based major) where students apply their expanding knowledge and skills to theoretical and practical design problems, majors in the College of Design take support courses dealing with design knowledge and skills, such as communication and presentation, human behavior, environment, history, philosophy, physical elements and systems, methods and management. The curriculum path has some flexibility, affording students the opportunity to concentrate in one area, while making contact with the other design disciplines. In addition to their faculty mentors, students are exposed to a broad range of design professionals through guest lecturers, juries, projects, and workshops.

Graduate studies are designed for students who want to build on undergraduate education and professional experience, as well as for those who come from non-design backgrounds and want to pursue advanced design degrees. The college offers graduate study leading to the Master of Architecture, Master of Art + Design (Animation or Fibers), Master of Graphic Design, Master of Industrial Design, Master of Landscape Architecture, and Ph.D. in Design. Please refer to the NC
State University Graduate Catalog for specific curriculum information on master’s and doctoral programs in the College of Design.

School of Architecture

In a world of changing conditions—social, cultural, economic and technological—the central task of the architect remains to give meaningful form to the physical environment. These rapid changes, however, force today’s architects to not only concern themselves with traditional design issues like shelter, appropriateness, comfort, and beauty, but also to address emerging concerns like sustainability, environmental conservation, rapidly expanding cities, adaptive uses and preservation of older buildings, providing built environments in a global market, and new means of producing architecture. The aesthetic revolution of the past few decades has also freed architects from the rigidity of earlier theory allowing for greater diversity and expressiveness in architectural design.

The School of Architecture has addressed the diversity of roles and responsibilities through its faculty and its curricula. Its distinguished faculty embrace a broad definition of the practice of architecture and is, therefore, free of a singular, dogmatic, or stylistic bias. This diversity is evident in the experience, area of interest, national origins, and educational backgrounds of the faculty. The architecture curriculum balances mathematics, English, natural sciences, and humanities and integrates with architectural design studios and a rich selection of design support courses. The design studio—a working laboratory in which the student learns how to design buildings under the guidance of a professor—is central to the curriculum.

The undergraduate Bachelor of Environmental Design in Architecture is a pre-professional degree that stresses the education of the individual and serves as the foundation for advanced, professional study in the discipline. The first semester is spent on design fundamentals in a studio common to all students in the College of Design. Following this introductory experience students receive a broad introduction to architectural design, theory, history, technology, and design processes, while exploring educational opportunities within the university.

Following the pre-professional program students may continue their studies in either of two professional programs: the one-year, postgraduate Bachelor of Architecture or two-year Master of Architecture program (see the Graduate Catalog for information on the latter program). Entry into both of these programs is competitive. To be accepted students must demonstrate potential for professional accomplishment, capability in design, and satisfy a specific set of professionally-oriented undergraduate requirements. Many students spend one or more years gaining professional experience in architecture firms or related fields before pursuing the advanced degrees. Educational enrichment is an important characteristic of the architectural program. The College of Design regularly presents public lectures by leading professionals and exhibitions of design and artwork. Electives are available in related disciplines—painting, sculpture, photography, landscape architecture, industrial design, and graphic design. Also available are field trips to buildings in urban centers of architectural interest, urban design studios conducted at the College of Design’s Downtown Design Studio, and a variety of foreign study programs including the College of Design’s Prague Institute.

Specific curriculum requirements are available on the Registration and Records website (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php).

Accreditation

In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. A program may be granted a six-year, three-year, or two-year term of accreditation, depending on the extent of its conformance with established educational standards. Doctor of Architecture and Master of Architecture degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree that, when earned sequentially, constitute an accredited professional education. However, the pre-professional degree is not, by itself, recognized as an accredited degree. The NAAB Conditions for Accreditation, including the required Student performance Criteria, can be viewed on the NAAB website (http://www.naab.org).

The North Carolina State University School of Architecture offers the following NAAB accredited degree programs:

- B. Arch. (pre-professional degree + 30 in professional program)
- M. Arch. (pre-professional degree + 48 graduate hours)
- M. Arch (non pre-professional degree + 96 hours)

Next accreditation visit for all programs: 2018

Department of Art + Design

The Department of Art and Design awards the Bachelor of Art and Design degree and the Bachelor of Arts in Design Studies. The pedagogical core of the program aims to reinforce foundation principles of design theory as applied to two-and three-dimensional design. Our curriculum addresses broad cultural, ecological, and societal considerations and promotes in our graduates the ability to meet the challenges of collaborative design. We emphasize the application of creative thinking and problem solving to design projects ranging from single to mass-produced artifacts. The areas of application span the range from formal design, fibers and surface design to emerging areas in media arts. Examples of current areas of study are hybrid applications of traditional and digital media that encompass imaging, animation, fiber and surface design, photography, printmaking, illustration, form generation and installations.

The Department of Art and Design believes there is an essential need for students in a technically-based research university to engage in course work that fosters creative thinking and problem solving. To meet this need, the department offers courses to all students in the university a minor in Art and Design. Minors are guided through a selection of courses with the consultation from a design adviser.

Opportunities

Career opportunities for graduates of the Department of Art and Design range from independent artist-designers to corporate level art-design directors. Graduates of this department are currently working in fields such as software design, multimedia, illustration, textile design, fashion and apparel design, art and design education, photography, filmmaking, special effects-digital, set design, exhibition design, museum education, public art and entrepreneurs.
Curricula and Degrees

Bachelor of Art and Design

The Department of Art and Design awards the Bachelor of Art and Design degree. The Bachelor of Art and Design degree is a broadly based, multidisciplinary undergraduate experience that fully utilizes a diverse faculty and bridges art and design with new technology. Students work closely with faculty in a well-planned sequence of progressively complex and in-depth studios. Students are advised through learning paths designed to produce optimal outcomes. This degree program provides a sound, well-rounded visual design education with a focus on providing students skills that allow them to perform and succeed in a wide variety of art and design professions after graduation.

While the degree is not profession-specific, students selecting the Bachelor of Art and Design degree may wish to use it as a foundation for graduate study in a specific art or design discipline. The goal of the curriculum is to provide structure for the creation of a new model of art and design professional. These individual artistic and practical talents are developed as different expressions of one potentiality.

Specific curriculum requirements are available on the Registration and Records website (http://www.ncsu.edu/registrar/curricula).

Bachelor of Arts in Design Studies

The Bachelor of Arts in Design Studies is a non-studio based program that provides an interdisciplinary orientation to the history and theory of the design disciplines, material culture and design thinking. Design Studies focuses on the social, historical, technological and physical contexts in which design is produced. It presents the formative role of design in shaping human values and experiences.

Undergraduate students will be introduced to the breadth of the design disciplines expanding their awareness of design and the design process. Students can explore the range of career options in the fields of design through Design Studies concentrations in Non-Profits Studies, Business Administration or Museum Studies. Individuals preparing for a graduate education in design theory and criticism, museum practice, business management, entrepreneurship or marketing in design may choose from courses suited to their unique objectives. Students who want more general education will develop an understanding of design and its intrinsic relationship to the broader culture.

Design Studies is:

- Open to students whose interests and talents in design are more general and/or cross-disciplinary than those in the specific student-based programs.
- Broadly engaged in issues of material culture.
- Preparatory for later advanced study in the design professions.
- A blend of aesthetic, cultural, historical, social, physical, technological, business and entrepreneurial knowledge.
- Collaborative in providing the learning and background necessary for further study in archival and cultural preservation, museum practice, conversation, collections administration, costume and theatre design, criticism, research, and arts and nonprofits management.

Design Studies is not a transitional program from which to transfer into one of the studio-based degree programs in the College of Design. Design Studies students who wish to change majors will need to apply for competing seats in the freshmen class of a studio-based program and are subject to the select admissions process that requires a portfolio review.

Specific curriculum requirements are available on the Registration and Records website (http://www.ncsu.edu/registrar/curricula).

Minor in Art and Design

The Minor in Art and Design’s objectives are to discover basic principles through hands-on activities, to apply design process and theory to solve problems creatively and efficiently, to increase awareness of one’s self and environment, and to foster an appreciation and understanding of the disciplines of Art and Design. Any curious undergraduate student with an overall grade point average of 2.75 in the university who seeks alternative methods of experiencing the environment in which we live will benefit from this minor.

The minor in Art and Design consists of 15 total credits hours of study, of which six (6) hours must be satisfied at the basic course level. The remaining nine (9) hours of courses may be selected from the course list in the information provided by the Art and Design adviser. A grade of “B” or better will be required for credit in all courses in the minor in Art and Design program. The course selection will be determined with guidance from the student’s minor adviser and tailored to the needs, interests, and goals of the student. Interested students seeking this minor should contact Professor Hernan Marchant.

Although, all efforts are made to accommodate minors, it is important for potential students to know and understand that access to Art and Design courses are based on a hierarchy where priority access goes to Design majors.

Minor in Design Studies (Non-Design Majors)

This minor’s objectives are to provide a general orientation to the practice and theory of design for students whose primary study and employment will be in the other disciplines, to clarify the role design plays in society, and to create informed consumers who are able to make intelligent decisions about communication, products, and environments in work and in their personal lives. Any undergraduate student in the university who is not majoring in a design discipline would benefit from this program. Any student seeking this minor should contact Professor Hernan Marchant in the College of Design for an application and assignment of a minor adviser.

Graphic Design

Graphic design is the process of bringing meaningful visual form to communication. Graphic designers translate communication goals through printed, environmental, and electronic presentations of information. Graphic designers use words and images to express messages that inform, persuade, and incite people to action. Graphic designers are active in all aspects of communication design. For example, they design books, magazines and newspapers for the publishing industry. They also create printed materials such as logotypes, symbols, annual reports, newsletters, business forms, and other related literature for corporations, institutions, businesses, and governmental agencies. Graphic designers also design user experiences (UX), websites, computer interfaces, and motion graphics such as film titles and typographic treatments for video, as well as on-air graphics for television. Graphic designers are employed in a variety of settings, including graphic design offices, advertising agencies, communication businesses, as well
as corporations, institutions, or governmental agencies as part of internal communications departments.

The Graphic Design program is a part of the Department of Graphic and Industrial Design. The Graphic Design program awards a Bachelor of Graphic Design, a professional degree, recognized by the American Institute of Graphic Arts (AIGA) and is accredited by the National Association of Schools of Art and Design (NASAD). The program includes the study of visual, theoretical, historical, and technical aspects of the discipline. The curriculum provides comprehensive experiences in the analysis of communication problems, the development of creative solutions to those problems, and the implementation and evaluation of those solutions. Required courses in typography explore the role of words and language in graphic communication, while courses in imaging provide students with experiences in a range of photographic, videographic, and computer media. Instruction in computer programs is fully integrated in design courses, and is not taught as a separate activity. In their studio coursework, graphic design majors prepare for careers in the field through the execution of demonstration projects of varying complexity and scale.

Specific curriculum requirements are available on the Registration and Records website (http://www.ncsu.edu/registrar/curricula).

Industrial Design

The Industrial Design program is a part of the Department of Graphic and Industrial Design. The Industrial Design program awards a Bachelor of Industrial Design degree. The pedagogical core of the department aims to reinforce the foundation principles of design theory as applied to traditional and advanced technologies, i.e. new media, materials, and production techniques. Our curriculum addresses broad cultural, technological, and societal considerations and promotes in our graduates the ability to meet the challenges of technological complexity through collaborative design. We emphasize the application of creative thinking and problem solving to design projects ranging from single to mass-produced artifacts. The areas of application span the range from industrial design to interactive multimedia and service design. The program is recognized by the Industrial Designers Society of America (IDSA) and accredited by the National Association of Schools of Art and Design (NASAD).

Opportunities

Career opportunities for graduates of the Department of Graphic and Industrial Design span the range from industrial design to virtual design. Graduates of this department are currently working in fields such as product development, furniture design, recreational product design, toy design, exhibition design, textile design, fashion design, photography, film making, special effects, set design, ergonomics and human factors.

Curricula and Degrees

The Department of Graphic and Industrial Design offers a four-year bachelor degree and two-year or more master’s degrees. Industrial Design is concerned with all human aspects of products/systems and their relationship to people. The industrial designer is responsible for product safety, aesthetics, maintenance, and cost. Industrial designers deal with consumer and industrial products. In order to achieve these ends, designers must be involved in four major design and research areas: human behavior, human-machine relationships, the environment, and the product itself. In addition, the designer’s responsibility extends into sustainability product liability and cross-cultural issues.

Areas of study in the Bachelor of Industrial Design include:

- furniture
- textiles, house wares
- appliances
- transportation
- tools
- farm equipment
- medical instruments
- electronics
- human-computer interfaces
- recreational support equipment

The goal of the Industrial Design curriculum is to teach the design and development of products or product systems and their relationship to human beings and the environment.

Graduates of the Bachelor of Industrial Design program have career opportunities in three general types of practice: corporate design offices in manufacturing companies, independent consulting offices, and governmental agencies.


Department of Landscape Architecture

Landscape architecture is a multi-faceted profession dedicated to the welfare of the physical environment and the living communities of the earth. It is a diverse and growing design profession that combines art, science, engineering, and technology. Landscape Architecture at the College of Design is especially concerned with the stewardship, restoration, and regeneration of the natural and cultural environments in urban, rural, and wilderness settings.

Bachelor of Landscape Architecture

The Bachelor of Landscape Architecture program was phased out beginning Fall 2011. No new students will be accepted into the program. If you are interested in pursuing landscape architecture at the College of Design, please view our Master of Landscape Architecture program.

The Department of Landscape Architecture currently enjoys full accreditation from the Landscape Architecture Accreditation Board (LAAB).

Minor in Landscape Architecture

The Minor in Landscape Architecture will provide a basic understanding of the nature of the profession of Landscape Architecture. Knowledge of Landscape Architecture history and theory provides a useful addition to a major in any of the University disciplines.

The Minor in Landscape Architecture is designed to:
• Provide a general background in the discipline with regard to landscape architecture research, development and design for students, whose primary professional practice will be in another discipline.
• Clarify the role of the profession of Landscape Architecture.
• Define how the profession of Landscape Architecture and all related professional disciplines contribute to the successful practice of design.

For more information, contact Gene Bressler: gene_bressler@ncsu.edu

College of Education

NCSU Box 7801
Raleigh, NC 27695-7801

Mission

The College of Education is a voice of innovation for learning across the lifespan. We prepare professionals who educate and lead. Our inquiry and practice reflect integrity, a commitment to social justice, and the value of diversity in a global community.

Vision

The College of Education will lead the way in North Carolina in increasing opportunities for success in education and reducing achievement gaps.

Undergraduate Degree Programs

Undergraduate degree programs that lead to a public school teaching license are offered in elementary education (K-6), mathematics education (9-12), middle grades education (6-9) (language arts, social studies, math, science), science education (9-12), and technology engineering and design education (7-12). In addition to being admitted to a curriculum, all teacher education candidates must meet program and unit requirements for admission to candidacy in teacher education (including a minimum 2.75 overall grade point average after completing 45 semester hours) and for admission to student teaching (including a minimum 2.75 GPA overall.).

All teacher education students must successfully complete a set of core courses (ED 204, ED 311, ED 312, EDP 304, ELP 344) as part of their professional studies course work. Candidates for licensure must also complete the edTPA and a required number of non-credit professional development activities.

The College of Education also jointly administers teacher preparation programs with the College of Agriculture and Life Sciences (Agriculture Education, 7-12) and the College of Humanities and Social Sciences (English, 9-12 and World Languages, K-12). Candidates enrolled in these affiliated programs must also complete the college core courses, edTPA, and non-credit professional development activities.

Students enrolled in a natural science or a mathematical science curriculum have the option of double majoring in the Department of Science, Technology, Engineering and Mathematics Education to earn a license to teach (6-9 or 9-12).

In addition, the College of Education offers graduate programs in:

• Higher Education
• Curriculum and Developmental Supervision
• Middle Grades Education
• Educational Administration
• Reading Education
• Educational Leadership and Policy Studies
• Mathematics Education
• Science Education
• Technology, Engineering and Design Education
• Social Studies Education
• Elementary Education
• Special Education
• English Education
• Training and Development
• Instructional Technology

The College also offers a Master of Arts in Teaching (MAT) for individuals who have degrees in other fields but wish to pursue a program leading to a master’s degree and an initial teaching license. The MAT program includes elementary education (K-6), English as a second language (K-12), English education (9-12), math education (9-12), middle grades education (6-9), science education (9-12), secondary social studies education (9-12), special education: general curriculum (K-12). Candidates for licensure must also complete the edTPA and a required number of non-credit professional development activities.

See the Graduate Catalog or contact faculty members for information on graduate programs. Public schools post-master’s licensure programs are available in some curricular areas.

All of the bachelor’s level and graduate level licensure programs are approved by the North Carolina State Board of Education. The college is accredited by the Council for the Accreditation of Counseling & Related Programs (CACREP) and the Council for the Accreditation of Educator Preparation (CAEP).

The College of Education is located in Poe Hall. It includes a Media Center and Instructional Computing Labs. The building houses laboratories for technology engineering and design education, reading, science, counseling and testing activities.

Student Success and Advising Center (SSAC)

The Student Success and Advising Center provides professional advising for all freshman, sophomores and transfer students in programs within the College of Education. The SSAC also serves as a resource for all College of Education students by offering services and programing such as student success workshops, student engagement opportunities and leadership development opportunities. Advisors are trained professionals who can supply valuable information about majors, courses, careers, requirements, policies, social life, academic support and transition issues.

Scholarships and Awards

Through the generous support of corporations and friends, the College of Education is able to offer over 45 scholarships to our undergraduate and graduate students each year based on merit and/or need. Scholarship
amounts range from $1,200 to $5,000. High school counselors receive information for all College of Education scholarships.

Find more information about Scholarships and Awards online (https://ced.ncsu.edu/undergraduate/undergraduate-scholarships-and-financial-aid/).

Honors Society

Kappa Delta Pi

The College of Education maintains the Omicron Rho chapter of Kappa Delta Pi (http://www.kdp.org), an international honor society in education. It elects those to membership who exemplify high academic achievement and exhibit the ideals of scholarship, high personal standards, and promise in teaching and allied professions.

Contact Dr. Drinda Benge for more information. E-mail: Drinda_Benge@ncsu.edu

EPSILON PI TAU International Honor Society for Professions in Technology

Epsilon Pi Tau (http://ced.ncsu.edu/student-life/organizations) recognizes student excellence in the study of technology and technology education and prepares practitioners for the technology professions. The Department of Science, Technology, Engineering, and Mathematics Education hosts the local chapter Alpha Pi. (https://ced.ncsu.edu/undergraduate/undergraduate-clubs-and-organizations/).

Contact Dr. Cameron Denson, Chapter Trustee, for more information. E-mail: Cameron_Denson@ncsu.edu

SAY Village

The college and University Housing have partnered to provide a living and learning residential experience for first year students called Students Advocating for Youth (SAY Village). Housed in Syme Hall, this experience targets students interested in working with elementary-aged youth. No matter what the major or aspirations for the future, advocating for youth spans many fields of study. For more information, visit the SAY Village website (https://ced.ncsu.edu/undergraduate/student-support-and-engagement-programs/students-advocating-for-youth-say/). Additionally, sophomore students who return to SAY Village and live in Syme Hall comprise what is known as the “DAY” portion of the program - “Determined Area Youth.” The DAY component enables those students returning to SAY to teach self-advocacy skills to area middle school youth.

International Activities

Faculty members have been involved in overseas projects in China, Ghana, Honduras, Japan, New Zealand, Peru, Puerto Rico, Russia, and South Africa. Some of the foreign language teacher education students spend a year in France or Spain in an exchange program. International students in several of the education programs and elsewhere at NC State participate in on-campus, multi-cultural opportunities. The College of Education has begun extensive efforts at globalization that will include opportunities to study abroad and student teach in countries such as China, Brazil, and other sites. You can find more information about the College of Education’s Study Abroad opportunities (http://ced.ncsu.edu/study-abroad) online.

Accreditation

All of the bachelor’s level and graduate level licensure programs are approved by the North Carolina State Board of Education. The college is accredited by the Council for the Accreditation of Counseling and Related Programs (CACREP) and the Council for the Accreditation of Educator Preparation. (CAEP). Please visit the College of Education’s website (http://ced.ncsu.edu/academics/licensureaccreditation). (https://ced.ncsu.edu/academics/professional-education/).

Agricultural Teacher Education

OVERVIEW:

Students desiring to become teachers of agriculture will be enrolled in the College of Agriculture and Life Sciences. The curriculum requirements for the teacher education program can be found under the Department of Agricultural and Extension Education. Below is a brief summary of the degree:

Agriculture remains one of the largest and diverse components of the economy of this country and the world. Teaching agriculture at the middle school or high school level is an exciting career. Agriculture teachers prepare students to either enter this dynamic industry of agriculture or for advanced study at two-year or four-year institutions leading to agricultural careers.

In addition to classroom and laboratory instruction in agriculture, our graduates are prepared to assist students in developing and conducting supervised agricultural experience programs that reinforce what is learned in the classroom. They also develop the skills necessary to be an FFA advisor and to provide those leadership and career development opportunities for their students.

Completion of the B.S. in Agricultural Education leads to teacher licensure in Agricultural Education, grades 6-12. There is a strong demand for agriculture teachers, and salaries are competitive with other agricultural careers. There are over 350 secondary agriculture teachers located throughout North Carolina.

Because agriculture is a diverse industry, students are allowed to select one area of agriculture in which to concentrate their studies. The concentrations are listed to the left. Often students choose to complete a minor in a second area of concentration.

For more information, please see the Agricultural and Extension Education website (https://cals.ncsu.edu/news/tag/agricultural-and-extension-education).

Specific curriculum requirements are available online (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php).

Education, General Studies

The General Studies Education program serves those students previously enrolled in teacher education programs at North Carolina State University, but whose career goals have changed.

English Teacher Education

Students desiring to become secondary English teachers in grades 9-12 will be enrolled in the College of Humanities and Social Sciences. In that college's section of this catalog, curriculum requirements for the teacher education option can be found under the Department of English. Students desiring to become Language Arts teachers in grades 6-9 will be enrolled in the College of Education.

French Teacher Education

Students desiring to be licensed to teach French K-12 by the State of North Carolina will be enrolled in the College of Humanities and Social Sciences. The curriculum requirements for the teacher education option in French can be found under the Department of Foreign Languages and Literatures in the College of Humanities and Social Sciences.

Spanish Teacher Education

Students desiring to be licensed to teach Spanish K-12 by the State of North Carolina will be enrolled in the College of Humanities and Social Sciences. The curriculum requirements for the teacher education option in Spanish can be found under the Department of Foreign Languages and Literatures in the College of Humanities and Social Sciences.

Department of Educational Leadership, Policy, and Human Development (ELPHD)

This program is only offered at the Graduate level. For more information on this program, please visit https://ced.ncsu.edu/elphd.

Department of Science, Technology, Engineering and Mathematics Education (STEM)

http://ced.ncsu.edu/stem

The Department of Science, Technology, Engineering and Mathematics Education prepares undergraduate students to become teachers of mathematics, science and technology. The department traditionally prepares competent professionals who have strong subject matter backgrounds and pedagogical skills. Departmental majors may seek licensure for teaching high school grades 9-12 or middle grades 6-9. Students in the high school curriculum in mathematics or science education take approximately 45 percent of their program in science and mathematics and may complete a double major, receiving a second degree in mathematics, statistics, or one of the sciences. Students in Technology, Engineering and Design Education may be licensed as teachers of technology programs in middle grades and high schools, 7-12. All pre-service teaching programs provide a broad background; an in-depth study in mathematics, technology or an area of science; and the development of professional competencies. In addition, the technology education curriculum provides a non-teaching graphic communications option with a general background for a variety of employment opportunities in business and industry. A minor in Technology, Engineering and Design Education is available.

The department also offers a minor in Graphic Communications in which the student develops proficiency in applying graphic techniques in both career and leisure activities.

Specific curriculum requirements are available online: https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php

Mathematics Education (p. 67)

- Middle Grades
- Secondary

Science Education

- Middle Grades
- Secondary

Technology, Engineering and Design Education

- Teacher Licensure
- Non-Licensure Graphics Communication Option

Mathematics Education, Secondary

https://ced.ncsu.edu/stem-ed/

With six different options in undergraduate degrees, including dual majors, our Mathematics Education program prepares professionals for a variety of positions of instructional leadership in the field of mathematics education. We offer degrees for middle school (grades 6 – 9) and high school (grades 9 – 12) education.

Specific curriculum requirements are available online (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php#requirement-courses-list).

Mathematics Education, Secondary

Student Success and Advising Center

Poe Hall, Room 505
Phone: (919) 515-0595

Allison McCulloch, STEM Education Undergraduate Coordinator
Poe Hall, Room 502 L
Phone: (919) 513-2803

Cyndi Edgington, Undergraduate Program Coordinator
Poe Hall, Room 502 J
Phone: (919) 515-1754

Mathematics Education, Middle School

Student Success and Advising Center

Poe Hall, Room 505
Phone: (919) 515-1062

Allison McCulloch, STEM Education Undergraduate Coordinator
Poe Hall, Room 502 L
Phone: (919) 513-2803
Cyndi Edgington, Undergraduate Program Coordinator
Poe Hall, Room 502 J
Phone: (919) 515-1754

Science Education, Secondary

In our high-quality Department of STEM Education, the Science Education program thoroughly prepares teacher leaders for middle school and high school science teaching in the concentration areas of Biology, Chemistry, Physics, Earth Science and Middle Grades Science.

Specific curriculum requirements are available online (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php).

Student Success and Advising Center
Poe Hall, Room 505
Phone: (919) 515-0595

Curricula in Science Education, Secondary

Penny Shumaker Jeffrey, Undergraduate Program Coordinator
Poe Hall, Room 326 P
Phone: (919) 515-1750

Middle Grades, Science Concentration

Penny Shumaker Jeffrey, Undergraduate Program Coordinator
Poe Hall, Room 326 P
Phone: (919) 515-1750

Technology, Engineering and Design Education

With an emphasis on innovation and active learning, this program prepares individuals for a variety of engineering and design employment opportunities, including a teacher licensure option and a non-licensure graphics communications option.

Specific curriculum requirements are available online (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php).

Student Success and Advising Center
Poe Hall, Room 505
Phone: (919) 515-0595

Curricula in Technology, Engineering and Design Education

Nolan Fahrer, Undergraduate Program Coordinator
Poe Hall, Room 510 F
Program phone: (919) 515-1741

Minor in Graphic Communications

http://ced.ncsu.edu/stem

Specific curriculum requirements are available online (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php).

This 15 hour minor develops competencies in selecting and applying graphic techniques in both career and leisure activities, provides in-depth manual and computer skills, and enriches visual perception and critical thought in graphic areas. Minor programs are individually designed to meet the needs of the student and to fit with the student’s major, such as engineering or technology, engineering, and education.

Admissions

Students may declare their intention to complete the Technology, Engineering and Design minor by consulting with the contact person listed below and must submit a “Declare a Minor (https://ncsu.service-now.com/kb_view.do?sysparm_article=KB0011754)” form. Please note that you may not minor in the same degree as your major.

Certification

The person listed below will certify the minor prior to graduation. The minor must be completed no later than the semester in which the student expects to graduate from his or her degree program. Paperwork for certification should be completed no later than during the registration period for the student’s final semester at NC State.

Contact Person

Brian Matthews, Minor Program Coordinator
502-O Poe Hall
919.515.1751
bmatthe@ncsu.edu

SIS Code: 13GCM

Minor in Technology, Engineering and Design Education

https://ced.ncsu.edu/programs/technology-engineering-and-design-education-bachelor/

Specific curriculum requirements are available online (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php).

This minor relates well with many majors and provides students a blend of cognitive and psychomotor experiences that enhance the understanding of technology and allow development of fundamental skills in selected technical areas. By allowing students to pursue professional interests within an area of technology and broadening their perspectives, the Technology Education minor should increase career options available to graduates in other majors.

More details may be found here (https://oucc.dasa.ncsu.edu/technology-engineering-and-design-education-13tem).

Admissions
Students may declare their intention to complete the Technology, Engineering and Design minor by consulting with the contact person listed below and must submit a “Declare a Minor (https://ncsu.service-now.com/kb_view.do?sysparm_article=KB0011754)” form. Please note that you may not minor in the same degree as your major.

Certification
Prior to the end of the second week of the student’s final semester, the student must sign the Application for Minor form (provided by the minor contact person). This form is a list of all grades received in the courses to be considered for the minor as well as the courses to be taken during the student’s final semester.

Contact Person
Nolan Fahrer, Minor Program Coordinator
510-K Poe Hall
919.513.0221
nefahrer@ncsu.edu
Effective Date: 1/2012
SIS Code: 13TEM

Department of Teacher Education and Learning Sciences (TELS)
The Department of Teacher Education and Learning Sciences advances education through scholarship, leadership, and advocacy. We prepare professionals who are committed to equity and social justice, have deep content knowledge, demonstrate strong working knowledge of effective pedagogies, and realize the potential of digital technologies to enhance learning. We shape the field of education by engaging in research that addresses current challenges, and by participating in cross-disciplinary work that deals with real problems in forward-looking ways. The department exemplifies an innovative merging of teacher education and the learning sciences that results in new pathways for teaching, scholarship, leadership, and service. The preparation that our students receive is unmatched in scope, priorities, and outcomes, assuring that our graduates are able to make profound contributions to education and society.

With over 300 undergraduate students, 200 graduate students, and 30 full-time faculty members, we offer more than 10 programs spanning the bachelor’s, master’s and PhD levels. We are the place where a deep understanding of current issues in teaching and learning comes together with a forward-looking vision for the promises of equity and digital learning to push the field of education forward.

Our nationally ranked graduate degree and certificate programs are led by faculty and staff who are committed to the success of our students. For information about our graduate programs, please go to https://ced.ncsu.edu/tels/graduate-programs/

Middle Grades Language Arts and Social Studies Program (MSL)
The Middle Grades Language Arts and Social Studies (MSL) undergraduate program in the Department of Teacher Education and Learning Sciences seeks to prepare teachers who can effectively educate young adolescents, while being responsive to their unique needs, interests, and abilities. Graduates earn licensure for teaching in grades 6-9 in two subject disciplines: language arts and social studies.

For Middle Grades Education, Mathematics/Science, see the Department of Mathematics, Science, and Technology, Engineering, and Design Education. https://ced.ncsu.edu/stem-ed/undergraduate-programs/

Elementary Education Program (ELM)
Unique among undergraduate teacher education programs, this degree creates teacher-leaders with deep content knowledge in all elementary disciplines with a special emphasis on STEM (science, technology, engineering and mathematics) education.

Graduates from our program are prepared to be leaders who have an unwavering commitment to serving children. Our STEM-based approach requires successful completion of at least 27 credit hours of courses focusing on STEM content. Our graduates also leave with a firm literacy foundation, taking two methods courses concentrating on reading and one on language arts.

Our Professional Studies courses in the Junior and Senior year include rigorous and relevant pedagogical experiences including fieldwork in every semester. Graduates are eligible for their Initial North Carolina K-6 teaching license.

For information on graduate programs in Elementary Education, please go to https://ced.ncsu.edu/tels/graduate-programs/

College of Engineering
118 Page Hall
NCSU Box 7904
Raleigh, NC 27695-7904
Phone: (919) 515-3263
fax: (919) 515-8702
e-mail: engineering@ncsu.edu

Men and women who seek a challenging technical career in research and development, design, construction, production, maintenance, technical sales, management, teaching, or other careers requiring a methodical, creative approach to problem solving, should consider an engineering or computer science education. At NC State, the College of Engineering has a distinguished and internationally recognized faculty, and the College of Engineering offers the opportunity for ambitious men and women to become the leaders and prime movers of our increasingly technological world. Because of the great influence of science and technology on our everyday lives, today’s engineers and computer scientists must be acutely aware of, and responsible for, the effects their creations may have on society. In addition to safety, aesthetics, economics, and energy, today’s technologists must consider environmental, sociological, and other “human concern” costs.

College of Engineering graduates work in diverse careers around the world. Most are practicing engineers, but because their education has equipped them well to address problems in a wide variety of fields, many College of Engineering graduates have become corporate presidents, lawyers, medical doctors, and leaders in government. The College of Engineering has engineering degree programs in twelve academic departments and three affiliated departments. These departments include: Biological and Agricultural Engineering; Joint Department of...
Biomedical Engineering; Chemical and Biomolecular Engineering; Civil, Construction, and Environmental Engineering; Computer Science; Electrical and Computer Engineering; Edward P. Fitts Department of Industrial and Systems Engineering; Materials Science and Engineering; Mechanical and Aerospace Engineering; Nuclear Engineering; Paper Science and Engineering within the Department of Forest Biomaterials; and Textile Engineering. Eighteen undergraduate degree programs are offered in these twelve departments. In addition, a degree program in Engineering is offered by special arrangement to the very few students who can clearly demonstrate the need for an individualized program of study. All departments also offer advanced studies leading to master’s degrees and the Doctor of Philosophy degree. Consult the Graduate Catalog (http://www.ncsu.edu/grad/catalog) for graduate degrees.

Seventeen programs in the College of Engineering are accredited by the Engineering Accreditation Commission of ABET; http://www.abet.org and are: aerospace engineering; biological engineering; biomedical engineering; chemical engineering; civil engineering; computer engineering; construction engineering and management; electrical engineering; BS in engineering Mechatronics concentration joint; BS in engineering, Mechanical Engineering Systems concentration; environmental engineering; industrial engineering; materials science and engineering; mechanical engineering; nuclear engineering; paper science and engineering; and textile engineering. One program in the College of Engineering, computer science, is accredited by the Computing Accreditation Commission of ABET, http://www.abet.org. Accreditation ensures that these programs satisfy requirements for acceptance by these nationally recognized agencies. All curricula and programs are designed to maintain the college’s national and international reputation while meeting the needs of the people and industries of the state and region through effective instruction, competent research, and the development of new and meaningful contributions to scientific knowledge.

The University Career Development Center is maintained by the university to assist continuing students and graduating students in achieving their career goals.

Degrees

Entering students receive assistance in planning an appropriate program of study and have available continued guidance from academic advisers throughout their academic careers. Beginning freshmen enroll in the Engineering First Year (EFY) for one to two years. After successfully completing college requirements, students may be admitted to a Engineering First Year (EFY) for one to two years. After successfully completing college requirements, students may be admitted to a

Bachelor of Science

The baccalaureate program provides preparation for entry into industry, government, business or private practice as well as graduate school. Graduates with a B.S. degree in engineering or computer science may be engaged in design development, production, construction, sales, maintenance, or the planning, operation or management of industrial units.

The undergraduate curricula offer programs of study leading to bachelor’s degrees in aerospace engineering, biological engineering, biomedical engineering, chemical engineering, civil engineering, construction engineering and management, computer engineering, computer science, electrical engineering, engineering-mechatronics, environmental engineering, industrial engineering, industrial engineering-furniture manufacturing option, materials science and engineering, mechanical engineering, nuclear engineering, paper science and engineering, and textile engineering. Graduation requirements include completion of one of the curricula with an overall grade point average of 2.0 and a grade point average of 2.0 in the major courses. The total number of required credits ranges from 120 to 128 semester hours.

Double Degree Programs

NC State students may wish to earn Bachelor of Science degrees in two fields from the College of Engineering. When the two courses of study are planned early and carefully, a number of courses can simultaneously satisfy requirements in both degrees. Humanities, social science, physics, mathematics, chemistry, English, and physical education sequences are common to most curricula. Students interested in such a program should consult the Office of Academic Affairs (118 Page Hall).

Other students may wish to combine a Bachelor of Science from the College of Engineering with a Bachelor of Science or Bachelor of Arts degree in another college at NC State University. A number of courses required for one degree may also satisfy requirements for a second degree. When the two courses of study are planned early and carefully, a double-degree program can be completed in as few as five years. Students interested in such a program should contact the Office of Academic Affairs (118 Page Hall).

Student Activities

Each department (http://www.engr.ncsu.edu/departments) in the College of Engineering (http://www.engineering.ncsu.edu) has technical societies open to every student enrolled in the respective degree program(s). In most cases, these are student chapters of national professional organizations. Each curriculum also has one or more honor societies to give recognition to students who have earned superior academic records. In addition, there are college-wide honor, professional, and service societies that offer personally and educationally rewarding opportunities. Such societies include, for example, the Engineers’ Council, Society of Women Engineers (SWE), and National Society of Black Engineers (NSBE). The complete list of student organizations (http://students.engr.ncsu.edu/orgs) provides more details.

High Impact Experiences

The NC State College of Engineering is actively educating and preparing engineers that will impact our world. Student participation in High Impact experiences -- work, research, international, and service -- is highly encouraged. College of Engineering students are encouraged to differentiate themselves with High Impact experiences and can learn about these opportunities via primary resources such as the Career
Calling and symbolizes the unity of the profession in its goal of benefiting and respect. The ring is worn as a visual symbol to attest to the wearer’s commitment to practice the profession ethically, with integrity, tolerance and acceptance of a stainless steel ring to be worn on the little finger.

Students interested in differentiating oneself with a High Impact experience may learn more through the primary resource (listed above) or Office of Academic Affairs.

Cooperative Education Program

This optional program is structured so that the student will alternate semesters of study with semesters of practical work as sophomores and juniors. The freshman and senior years are spent on campus, while sophomore and junior academic work is spread over a three-year period to permit alternating academic semesters with work-experience semesters. Students earn a salary while they are in industry. This income can prove useful in offsetting college expenses. The Co-op plan can be completed in five years, during which time the student receives 12 to 18 months of industrial experience.

Students in all curricula in the College of Engineering may apply for the Co-op program if they have a grade point average of 2.5 or better. Application for admission into the Co-op program should be made early in the spring semester of the freshman year. Students must be accepted into an engineering degree program prior to beginning the first Co-op assignment.

Further information may be obtained from:
Cooperative Education Program (https://cdc.dasa.ncsu.edu/students/learning-about-co-op)
Career Development Center
2100 Pullen Hall

Induction to the Profession

All graduating students in the College of Engineering are invited to participate in the Induction to the Profession Ceremony (https://www.engr.ncsu.edu/academics/undergrad/rings), held during each graduating season. The event acknowledges the fellowship of engineers and computer scientists who are trained in science and technology and who are dedicated to the practice, teaching, or administration of their profession.

Initiation into the Profession includes commitment to the "Obligation" and acceptance of a stainless steel ring to be worn on the little finger of the working hand. Only those who have met the high standards of professional engineering and computer science training or experience are invited to accept the Obligation, which is voluntarily received for life. This commitment is not a trivial act but is, rather, like the Hippocratic Oath, a promise to practice the profession ethically, with integrity, tolerance and respect. The ring is worn as a visual symbol to attest to the wearer’s calling and symbolizes the unity of the profession in its goal of benefiting humankind. The stainless steel from which the ring is made depicts the strength of the profession.

Benjamin Franklin Scholars Program

A limited number of freshmen in the College of Engineering apply and are selected to participate in the Benjamin Franklin Scholars Program (https://ids.chass.ncsu.edu/dual/franklin.php). Students completing the program earn a Bachelor of Science in an engineering discipline or in computer science and a bachelor’s degree in humanities or social sciences.

This double-degree program, a joint undertaking of the College of Engineering and the College of Humanities and Social Sciences, provides a unique opportunity to integrate a solid base of knowledge in technology or science with a broad humanistic and social perspective. The curriculum for the double-degree program has four main components: (1) a strong general education, (2) specially designed interdisciplinary courses, (3) all technical course requirements associated with the engineering or computer science degree, and (4) and a second major in the humanities and social sciences chosen from among the traditional majors or an interdisciplinary major. Students who have been accepted into a College of Engineering degree program, have declared a major in the College of Humanities and Social Sciences, and have at least a 3.0 GPA are generally eligible for scholarships from the program. With careful planning, the program can be completed in five years.

For more information, contact:
Dr. Ross Bassett, Program Director
ross_bassett@ncsu.edu (ross_bassett@ncsu.edu)
or the Office of Academic Affairs (118 Page Hall)

Grand Challenge Scholars Program

The National Academy of Engineering’s list of fourteen Grand Challenges for Engineering in the 21st century is a call to action and a means of focusing society’s attention on the opportunities and challenges affecting our quality of life. The mission of the Grand Challenge Scholars Program is to increase the awareness of future engineers about the challenges that face our world today. The College of Engineering in partnership with the National Academy of Engineering established this program, which aims to progressively develop undergraduate scholars of diverse engineering disciplines and backgrounds focused on solutions to the Grand Challenges by broadening their outlook on societal concerns, promoting social responsibility, lifelong learning, and on-going engagement in the problems facing the 21st century world.

There are five programmatic components that guide all Grand Challenge Scholars in choosing their curricular and co-curricular experiences:

1. a capstone experience wherein Scholars engage in sustained research or hands-on projects to help design innovative solutions to the Grand Challenges through deep immersion in an academically rigorous environment,
2. an interdisciplinary curriculum connecting Scholars’ engineering education to various fields of study as well as how other disciplines can enhance creative and analytical problem-solving,
3. experiences in the global dimension that apply a diversity of perspectives and cross-cultural competencies that span worldwide markets, international borders, and multicultural societies to inform the engineering process,
4. entrepreneurial experiences that develop and market engineering solutions which scale up for mass production, transmission, adoption, and consumption among people and places around the world, and
5. service-learning opportunities to create and cultivate a personal commitment to lifelong learning, social responsibility, and ethical duty for engineering a better tomorrow for all. Students who
have been accepted into a College of Engineering degree program and have at least a 3.4 GPA are generally eligible to apply to the program.

For more information, visit the Grand Challenge Scholars Program website (http://go.ncsu.edu/grandchallenges), e-mail engineering@ncsu.edu with Grand Challenge Scholars Program in the subject field, or contact the Office of Academic Affairs (118 Page Hall).

Computers

The College of Engineering provides its students with a large number of workstation labs for the purpose of running high-end engineering applications. In addition, incoming freshmen are encouraged to own a laptop computer to use in classroom, lab, and mobile settings. The first-year computer lab course, E 115, Introduction to Computing Environments, instructs students in the use of their own computers to interface effectively with the vast resources of the college computing environment, named “Eos.” The course emphasizes the student’s responsibility for his or her own computer, including security and hands-on maintenance. Computers, both lab-based and student-owned, are central to engineering education in the college.

Transfer Program

Students with non-engineering degrees or one or more years of academic work completed at other institutions may apply for transfer admission to the College of Engineering through the Office of Undergraduate Admissions. Students are admitted from four-year institutions as well as from junior and community colleges. Students currently attending or anticipating attendance at other institutions are advised to contact the Office of Academic Affairs for information on transfer requirements, transfer course credit and admission to NC State.

Golden LEAF Biomanufacturing Training and Education Center

Biomanufacturing is the production of useful products such as penicillin through the use of biological molecules and living organisms. The Golden LEAF Biomanufacturing Training and Education Center (BTEC) simulates a biomanufacturing pilot plant capable of producing biopharmaceutical products and packaging them in a sterile, current Good Manufacturing Practices (cGMP)-like environment, and is the only facility of its kind in the nation and one of only a few in the world.

The BTEC hands-on, laboratory-intensive academic program is provided using large-scale equipment, including bioreactors, downstream separation and purification processes, bioreactor control systems, and aseptic processing operations. In addition to undergraduate and graduate courses, the BTEC educational program includes an undergraduate Minor in Biomanufacturing, and a University Certificate in Biomanufacturing. A Post-baccalaureate Certificate in Biomanufacturing is available for students who have earned a bachelor’s level degree. Undergraduate students majoring in chemical engineering may elect to complete a concentration in biomanufacturing sciences. The BTEC graduate program will include a Minor in Biomanufacturing, a Master of Science degree, and a Professional Science Masters in Biomanufacturing.

For additional information, please visit the BTEC website (http://www.btec.ncsu.edu).

Department of Biological and Agricultural Engineering

The Department of Biological and Agricultural Engineering applies engineering principles to biologically-based systems, primarily in agricultural and environment. The BAE department provides excellent educational opportunities at the undergraduate level with a Biological Engineering program that is well recognized as among the finest in the United States.

The BE curriculum includes concentrations in agricultural engineering, bioprocess engineering, and environmental engineering. All concentrations within the BE curriculum emphasize core courses in biology, mathematics, physics, chemistry, hydraulics, mechanics, materials, and thermodynamics, which collectively provide solid training in basic science and engineering. The curriculum is designed to prepare each graduate to master fundamentals of engineering and biology, develop the ability to solve engineering problems, improve self-confidence, and apply the creative process of engineering design. The educational experience is capped off with a two semester senior level course that immerses each graduate in the team approach to developing engineering solutions to complex problems. By the time of graduation, approximately 80% of BE graduates will have passed the Fundamentals in Engineering exam and thus be well on their way toward licensure as a Professional Engineer.

Opportunities

BE students learn to solve a wide variety of engineering problems and will have opportunities for specialization through selection of a specific concentration. Scientific and engineering principles are applied: to conserve and manage air, energy, soil and water resources; to manage, protect and restore natural ecosystems; to understand and utilize biological, chemical and physical processes for the production and conversion of biomass to bio energy; to analyze, understand and utilize mechanical properties of biological materials; to design and develop machinery systems for all phases of agricultural and food production; to design and evaluate structures and environmental control systems for housing animals, plant growth, and biological product storage; to develop improved systems for processing and marketing food and agricultural products; and to design sensor-based instrumentation and control systems for biological and agricultural applications.

Graduates of the BE curriculum receive a “B.S. in Biological Engineering,” qualifying them for positions in design, development, and research in industry, government and public institutions. The curriculum also prepares students for post-graduate work leading to advanced degrees. Typical positions filled by recent BE graduates include: stream and wetlands restoration project manager; product design; development and testing engineer; plant engineering and management; engineering analysis and inspection for federal and state agencies; engineering consultant and research engineer. Entry-level salary ranges for BE graduates are similar to those of Civil, Industrial, and Mechanical Engineering graduates.

Curricula

The BE curriculum is jointly administered by the College of Agriculture and Life Sciences and the College of Engineering and combines the fields of engineering, biology and agriculture. The BE curriculum is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org. BE graduates are qualified to become registered
professional engineers by passing the appropriate examinations and upon completing the engineering experience requirements. Specific curriculum requirements are available online.

The BAE faculty, in concert with program constituencies, has developed the following undergraduate program objectives. Within the first five years following graduation, NC State’s Biological Engineering graduates will:

- Excel in their careers or in graduate school by applying their knowledge of engineering principles, processes, and procedures;
- Practice engineering professionally and ethically;
- Communicate effectively in a professional environment; and
- Be engaged in lifelong learning and professional development.

**Joint Department of Biomedical Engineering**

Biomedical engineering is a profession that develops and applies engineering knowledge and experience to solve problems in biology and medicine and to enhance health care. Biomedical engineers are professionally trained to combine the rigors of medical and biological studies with the power of engineering analysis and design. People become biomedical engineers to be of service to others, to enjoy the excitement of understanding living systems, and to use state-of-the-art science and technology to solve the complex problems of medical care. The emphasis in biomedical engineering is on finding solutions by researching, testing, and applying medical, biological, chemical, electrical, and materials information. Biomedical engineers are unique individuals who make contributions to health care that are both satisfying to themselves and beneficial to others.

**Opportunities**

Biomedical engineers are employed by hospitals, pharmaceutical companies, medical device and testing companies, government agencies, universities, and medical schools. With so many areas of specialization within the field, graduates are encouraged to further their education by attending graduate or professional school after graduation. Graduates from this program have attended graduate programs in biomedical engineering, physical therapy, mechanical engineering, industrial engineering, microbiology, virology, public health, and sports physiology, among others, at many different institutions. Graduates who have taken additional courses to satisfy entrance requirements have also been accepted by medical, dental and pharmacy schools.

**Program Educational Objectives**

The Biomedical Engineering Program is preparing its graduates to:

- Pursue advanced studies in biomedical engineering or in other disciplines.
- Meet or exceed the expectations of their employers in the biomedical engineering workplace, or in other professional careers.
- Continue to learn and adapt to evolving technology and changing career opportunities.

**Curriculum**

The department offers the Bachelor of Science in Biomedical Engineering.

Students studying biomedical engineering at NC State and UNC-Chapel Hill are challenged with a curriculum at the interface of engineering and medicine. During the first year, students are introduced to the fundamentals of engineering. These courses include calculus, physics, chemistry and biology. All of which provide the foundation for future engineering courses. Once accepted into the program, students take engineering courses in mechanics, circuits and materials followed by specialized courses in biomedical engineering. The design process is woven throughout the curriculum. Students take courses that familiarize them with manufacturing processes while preparing them for the capstone senior design course that use a Design Control Process based on the FDA’s Quality System Regulations. Computers are used throughout the program. Graduates will be prepared for professional employment in research, design, engineering and the life sciences. First year students interested in this curriculum should enroll in the Engineering First Year program and select BME as their intention.

Specific curriculum requirements are available online (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php).

**Scholarships**

Students in this degree program are eligible for scholarships from the College of Engineering.

**Facilities**

Teaching facilities are located at both campuses. These facilities include state-of-the-art classrooms and laboratory facilities, study space, and convenient access to computing resources. Extensive Internet and videoconferencing capabilities are deployed to facilitate convenient faculty-student contact.

Research facilities include advanced materials testing instrumentation, imaging resources, rapid prototyping facilities, biomedical instrumentation, and clinical resources.

**Minor in Tissue Engineering**

The Minor in Tissue Engineering is intended to provide graduates with the knowledge base and practical skills that will prepare them to quickly contribute to research and manufacturing of devices designed for repair and replacement of tissues and organs. Interested students should contact the BME Student Services Coordinator for information and application materials.

**Department of Chemical and Biomolecular Engineering**

Chemical engineers create, develop, and manage processes that effect molecular change, including changes in chemical composition, physical state, structure, and/or purity. The end goal is technologies and products that are useful to society.

Since in-depth knowledge of chemistry is an important tool most chemical engineers use in their work, in some situations there’s an overlap between the professional interests of chemical engineers and their nearest scientific relatives, chemists. An important difference between the two is that most chemists are concerned with how a molecule can be synthesized and what series of steps might achieve the highest yield of the compound, while most chemical engineers focus on applying chemistry, other sciences, and technical knowledge to solve “real-world” problems. Chemists usually work in a laboratory environment,
while most chemical engineers work on “large-scale” projects outside the laboratory environment. It has been stated that chemists typically ask “why” questions and chemical engineers ask “how” and “what for” questions.

Example projects for chemical engineers are: preventing pollutants from entering the air and water; using fermentation to produce penicillin and many other pharmaceuticals; converting crude oil into fuel and valuable components that can be processed further into products such as cosmetics, synthetic fibers, dyes, and plastics; manufacturing microchips, paper, paints, textiles, and all manner of chemicals; and designing a process or plant to accomplish these tasks.

Opportunities
Careers in chemical engineering are sometimes exciting, always demanding, and ultimately provide a sense of accomplishment and achievement. Graduates find employment in sub-disciplines such as production, technical service, sales, management and administration; research and development; and consulting and teaching. Students desiring careers in teaching, research, or consulting are encouraged to continue their education and pursue a graduate degree (consult the Graduate Catalog). The undergraduate curriculum also provides strong preparation for graduate study in a wide range of professional specialties, and chemical engineering graduates often pursue careers in the medical sciences, business management, and law.

Curriculum
The successful practice of chemical engineering requires a broad, diversified preparation which promotes original and disciplined thought, enthusiastic inquiry and, ultimately, original and constructive accomplishment. The knowledge base chemical engineers develop in organic, physical, and inorganic chemistry is similar to the level of expertise that’s developed by chemistry majors. Mathematics, physical sciences, and distributed humanities courses are also valuable areas of study.

The undergraduate curriculum emphasizes the scientific, engineering, and economic principles involved in the design and operation of chemical processes. Design methodologies are practiced in all core chemical and biomolecular engineering courses, and this integrated design experience culminates with the senior design sequence, CHE 450 and CHE 451.

In order to gain in-depth understanding in a specialized technical area, students can elect to pursue studies in one of several chemical engineering curriculum concentrations. In all cases, the degree earned is the Bachelor of Science in Chemical Engineering, and graduates from all concentrations are fully qualified to work in any chemical engineering environment. The curriculum concentrations are:

Biomanufacturing Sciences Concentration in Chemical Engineering
The Biomanufacturing Sciences Concentration provides students with the knowledge base and hands-on skills that prepare them to quickly contribute to a biomanufacturing operation. Pharmaceuticals, vaccines, enzymes, and bio-fuels are example products. Students completing this concentration also receive a Minor in Biomanufacturing.

Biomolecular Concentration in Chemical Engineering
The Biomolecular Concentration emphasizes hands-on laboratory molecular biology skills that are highly relevant to pharmaceutical, medical, engineering, and agricultural fields. Students completing this concentration also receive a Minor in Biotechnology.

Nanoscience Concentration in Chemical Engineering
The Nanoscience Concentration develops students’ understanding of the scientific and technological principles associated with the design and manufacture of patterns and devices with features and advanced functionality on the nanometer scale.

Sustainable Engineering, Energy, and the Environment Concentration in Chemical Engineering
The Sustainable Engineering, Energy, and Environment Concentration connects chemical engineering concepts with global grand challenges in the generation of clean and affordable energy, as well as sustainable and environmentally responsible engineering practices.

Honors Program in Chemical Engineering
The Honors Program allows students to gain a deeper understanding of chemical engineering principles than would be acquired by completing the standard CHE curriculum. Admission to the program requires students to have earned a minimum overall GPA of 3.5 and a minimum GPA of 3.5 in CHE 205 and CHE 225. An honors thesis based on a supervised research experience and completion of at least one semester of faculty-supervised research are required for completion of the Honors Program.

Program Educational Objectives
Given the foundation of knowledge, skills, experiences, and the discipline of hard work and critical thinking provided by the curriculum, our students are expected to achieve one or more of the following within five years of graduation:

1. Excel in engineering practice and/or entrepreneurship in various industries, including petrochemical, biochemical, pharmaceutical, fine chemical, environmental, semi-conductor, pulp and paper, advanced materials, and health care industries.

2. Advance professionally in positions of increasing leadership responsibilities in their chosen career fields.

3. Earn an advanced degree or certification leading to a career in academia, law, medicine, or research and development.

4. Exhibit professionalism, a habit of continual learning, interest in contemporary issues of importance to society, appreciation of the impact of engineering development in society, and ethical responsibility particularly in the context of environmental protection, process/product safety, financial accountability, and community well-being.

prospective students (http://www.che.ncsu.edu/information/prospective- undergrads.html) is also available on the site.

Department of Civil, Construction, and Environmental Engineering

The Department of Civil, Construction, and Environmental Engineering offers three undergraduate degree programs concerned with the improvement and care of both public and private infrastructure and natural environments. The degree programs address the planning, design, construction, operation, and maintenance of buildings, dams, bridges, harbors, power facilities, pollution control facilities, and water supply and transportation systems. The curricula provide academic preparation for students considering careers in civil, construction, or environmental engineering.

The department offers undergraduate degree programs leading to the Bachelor of Science in Civil Engineering, the Bachelor of Science in Construction Engineering, and the Bachelor of Science in Environmental Engineering. All three programs are accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org. Graduation from an ABET accredited engineering degree program is the first step toward licensure as a Professional Engineer. All three programs also prepare students for graduate education.

Opportunities

Society will always need constructed facilities to live, work, and sustain their lives and environment, and civil, construction, and environmental engineers will always be needed to plan, design, and construct these facilities. Civil, construction, and environmental engineering comprise such diversified fields that graduates have a wide choice in types and locations of employment. Jobs range from federal, state, or municipal agencies to a variety of manufacturing and processing industries, consulting firms or construction companies. The work may be performed partially or wholly in an office or in the field and may be located in a small community, a big city, an industrial center, or even in a foreign country. Careers in either professional practice or teaching and research are common for many graduates who complete advanced degrees.

Facilities

The Department of Civil, Construction, and Environmental Engineering is well-equipped with computer laboratories that provide both individual computers and collaborative learning spaces. The College of Engineering at NC State maintains a state-of-the-art computing environment known as Project Eos, a large-scale distributed system that consists of hundreds of computers across the college on both main and Centennial Campuses. Eos is a client-server network running a location-independent file system that delivers a comprehensive suite of engineering applications to both Windows and Linux computers, and to student-owned computers through remote access and the Virtual Computing Lab. Project Eos is operated by a professional support group that provides consultation and basic system and software services.

The department’s other laboratories contain a variety of special equipment for instruction and research in structures, mechanics, soils, construction materials, construction engineering, hydraulics and environmental engineering. Environmental engineering research facilities include over 5000 sq. ft. of laboratory space devoted to environmental chemistry, microbiology, process engineering, and hydraulics. Students have the opportunity to conduct research on water and wastewater treatment, ground water contaminant transport and site remediation, refuse decomposition, anaerobic microbiology, analytical chemistry, and applied molecular microbial ecology.

The Constructed Facilities Laboratory (CFL) on Centennial Campus features unique facilities devoted to all aspects of constructed infrastructure research and assessment. Facilities include: specially designed reaction floors and walls for testing large-scale structural systems to failure, such as full scale bridge girders up to 100 feet long and beam-column systems subject to earthquake loading; and large pits up to 20 feet deep for testing granular and compacted soils for foundation strength. State-of-the-art facilities like these heighten students’ learning experiences by exposing them to the forefront of technological advances.

Curricula

The Department of Civil, Construction, and Environmental Engineering at NC State is home to the educational programs in Civil Engineering, Construction Engineering, and Environmental Engineering. A single department head and management structure direct the educational missions of these three related fields. Each curriculum is designed to prepare the graduate for a career in the respective field and for lifelong learning through graduate education, continuing education and/or self-study.

Civil Engineering Degree

The Civil Engineering curriculum provides academic discipline in mathematics, the physical sciences, the humanities and social sciences, and the technical aspects of civil engineering. After introductory exposure to several of the professional areas such as environmental and water resources, geotechnical, structures, transportation and construction engineering, the student builds additional depth in several of these specialties. Students learn to include principles of sustainability in civil infrastructure designs and understand basic concepts in project management, business, public policy, leadership, and professional ethics.

Specific curriculum requirements are available on the Office of Undergraduate Courses and Curricula website, https://oucc.dasa.ncsu.edu/engineering-COE

Educational Objectives in Civil Engineering

Within a few years of graduation alumni of the Civil Engineering program will:

1. Function successfully in a professional environment by utilizing and enhancing their problem-solving and communication skills;
2. Continue learning through graduate or other professional education and obtaining licensure where appropriate;
3. Function in team-oriented, multidisciplinary open-ended engineering activities considering the societal and economic impacts of engineering decisions, and the professional and ethical responsibilities of civil engineers.
4. Promote organizational success with consideration of cost and time management while practicing and promoting ethical behavior and stewardship of a sustainable environment

Construction Engineering Degree

The Construction Engineering curriculum is designed for the student interested in the planning, design, direction, and management of construction projects. It includes the core course requirements in mathematics, the physical sciences, and the humanities and social
sciences. After exposure to engineering fundamentals and engineering design of facilities, the curriculum provides a series of specialty courses in construction engineering related to the analysis, design, and management of the construction process. The General Construction Concentration is designed for students pursuing careers in the building, residential, highway, and heavy construction industry. The Mechanical Construction Concentration is designed for students pursuing a career emphasizing construction of mechanical systems for buildings, residences, and industrial facilities.

Specific curriculum requirements are available on the Office of Undergraduate Courses and Curricula website, https://oucc.dasa.ncsu.edu/engineering-COE

Educational Objectives in Construction Engineering

Within a few years of graduation alumni of the Construction Engineering program will:

1. Function successfully in careers emphasizing application of construction engineering and management principles with the ability to solve a broad set of engineering problems in construction.
2. Practice construction engineering including the design and management of the construction process to achieve needed safety, quality, durability, sustainability, and economic objectives.
3. Function in team-oriented, multi-disciplinary, open-ended engineering activities considering the societal and economic impacts of construction, and the professional and ethical responsibilities of the construction engineer.
4. Engage in life-long learning through graduate study, self study, or continuing education; pursue licensure; provide mentoring to those under their supervision and influence; and provide leadership in their employment organizations, industry associations and professional societies.

Environmental Engineering Degree

The Environmental Engineering curriculum is designed for students interested in environmental sustainability. The curriculum provides students with the foundations in science, mathematics, and engineering required to observe, understand, model, and analyze environmental systems as well as to design critical components of society’s infrastructure. Upon graduation, students are prepared to work in such areas as water treatment, water resources engineering and management, air pollution control, solid waste management, and energy management.

The curriculum emphasizes the interdisciplinary nature of environmental engineering with courses in both engineering and life sciences, including specialized courses on energy and climate, pollution control, and waste management.

Specific curriculum requirements are available on the Office of Undergraduate Courses and Curricula website, https://oucc.dasa.ncsu.edu/engineering-COE

Educational Objectives in Environmental Engineering

The educational objectives of the environmental engineering program at North Carolina State University are to prepare its graduates to:

Within a few years of graduation alumni of the Environmental Engineering program will:

1. Function successfully in a professional environment by utilizing and enhancing their problem-solving and communication skills.
2. Continue learning through graduate or other professional education and obtaining licensure where appropriate.
3. Promote organizational success with consideration of cost and time management, and demonstrate global and societal awareness, while practicing and promoting ethical behavior and stewardship of a sustainable environment.

Post-Baccalaureate Study

If a student is interested in more specialization in one particular area, advanced level education is available leading to the Master of Civil Engineering, Master of Environmental Engineering, Master of Science in Civil Engineering, Master of Science in Environmental Engineering, or the Doctor of Philosophy in Civil Engineering. The MCE and MENE degrees are also available through the Engineering Online program. Specialization areas include coastal engineering, computing and control systems, construction engineering, construction materials, environmental and water resources engineering, geotechnical engineering, structural engineering and mechanics, and transportation engineering. With judicious choices of electives during the B.S. program, a student may also prepare for additional studies in law, business administration, business management, or city and regional planning.

Student Activities and Scholarships

Student chapters of the American Society of Civil Engineers, American Concrete Institute, Associated General Contractors, National Association of Home Builders, Institute of Transportation Engineers, and Air and Waste Management Association undertake projects to further student exposure to the profession. Guest speakers representing various aspects of engineering practice speak at regular lunch meetings. Students who accumulate outstanding academic records may be considered for membership in the Chi Epsilon Honorary Society. Through the generosity of industry and program alumni, many scholarships are available on a competitive basis to students in addition to university, college, and need-based financial aid.

Department of Computer Science

Computers

Computer software is ubiquitous in modern life. In addition to high-tech machines like aircraft and medical imaging systems, everyday devices as diverse as automobiles, vending machines, refrigerators, and video-game consoles now contain some type of computer. Computers help design our highways, bridges, pharmaceuticals, electronic circuits, and buildings; handle banking, stock trading, and other financial transactions; assist in management decisions; control communications, utilities, and manufacturing processes; and analyze farm production. Computers watch over our health, security, and safety. Computers serve as vital research tools for scientists, from those exploring the farthest reaches of the cosmos to those searching for subtle patterns in the human genome. Explosive growth in computer gaming, digital entertainment, and multimedia-based education has spawned entirely new industries in recent years. Computers are linked together in worldwide networks that provide information and computing power to nearly anyone who wants it, anywhere in the world.

Opportunities

Designing computer systems, and the software that runs on them, is the job of computer scientists. Computer scientists can find demand...
for their innovation, design, analysis, and engineering skills in the full
gamut of professions. As a direct consequence of the increasingly critical
role of computers in society, the discipline of computer science has
enjoyed rapid growth for many years, and the trend looks likely to
continue. The most credible employment projections indicate a serious
and worsening nationwide shortfall in the supply of people skilled in
information technology, and a resulting steady rise in demand and salaries,
for decades to come. Computer Science graduates from NC State are in
high demand, including by employers that are extremely selective in their
national recruiting.

Anchoring one corner of the world-famous Research Triangle Park, and
located in modern state-of-the-art teaching and research facilities on NC
State’s Centennial Campus, the department and its students and faculty
benefit from strong and active industry partnerships. NC State Computer
Science is one of the top suppliers in the nation of new graduate hires to a
number of high-tech companies, including several Fortune 500 companies,
some with a substantial presence in the Research Triangle. Starting
salaries for our undergraduates now average over $65,000 and show a
steady increase. Opportunities are also plentiful for graduate study for
those who wish to pursue the field in more depth.

Curriculum

Like all freshmen in the College of Engineering, Computer Science
freshmen take a core of courses in the humanities, chemistry, mathematics,
physics, and computing. After successfully completing the required
courses, students may apply to join the Department of Computer Science
degree-seeking students.

The Computer Science curriculum teaches students the skills necessary
to understand, design, implement, test, and deploy computer systems and
software of all kinds, in addition to exposing students to the application
of computers to problem solving in diverse fields, and the mathematical
methods needed to analyze and compare both computation problems
themselves and alternative approaches to solving them.

Core courses provide a foundation for all students in programming
languages, data structures, software engineering, computer architectures,
numerical analysis, theory of computation, and the social and ethical
dimensions of the practice of computer science.

Computer science electives are chosen in consultation with advisers,
usually starting during the junior year. These electives allow exploration
of more advanced areas: among them artificial intelligence, database
management systems, computer graphics, human-computer interface
design, multimedia technology, web technologies, networks, privacy and
security, remote sensing, computer architecture, distributed computing,
and operating systems. Electives can be chosen to provide coherent
concentration in areas such as computer and network security, software
engineering, and computer game design. A special focus is on skills that
help our students be competitive in the global economy. These skills
include technical communication, understanding of business principles in
organizations that use information technology, an aptitude for innovation,
an understanding of intellectual property issues, and an understanding of
the latest technologies, such as web-services, security and sensors, as well
as both closed and open source solutions and engineering issues.

All Computer Science majors must complete a team project, most often
in an area such as networking, computer graphics, computer gaming,
database technology, or web services. Projects under the auspices of
the department’s Senior Design Center have industrial sponsors, so
student teams gain experience working jointly with industry representatives
to achieve project goals. The department’s location near the Research
Triangle Park also means many opportunities for Co-ops and internships,
part-time employment, and forging the industry contacts often vital in a
successful job search.

The undergraduate curriculum leads to a Bachelor of Science in
Computer Science. This program is nationally accredited by the Computing

Game Development Concentration

Computer games are some of the most complex software development
projects and employ some of the most advanced technologies of any
application area of computer science. The entertainment software sector
is a multi-billion dollar industry with increasing demand for new employees
trained in these technologies and methods. In addition to the more familiar
entertainment sector, these technologies also have applications to such
areas as training, education, visualization, and social interaction forums
— so-called “serious games.” North Carolina is now among the top tier
of US states with centers of game industry employment. As the game
industry continues to grow, demand by North Carolina companies for new
graduates with strong background in computer science with a focus on
game development will also expand.

Many aspects of computer game development are unique to the game
industry and the game development concentration provides specialized
coursework in these areas. The game development concentration focuses
on game development technologies while preserving the breadth and
depth of the general computer science BS degree. The concentration
requires that students take both the initial course on computer graphics
(CSC 461) and the initial course on game development (CSC 481). They
must choose as a concentration project either the graphics or game
development advanced elective (CSC 462 or CSC 482, respectively). Two
additional game restricted electives are chosen from a list of CSC courses
with content highly relevant to game development. Of the nine credit hours
required for other electives, students in the concentration must select three
courses from a list that spans topics such as fiction writing, film, and music.
These courses provide grounding in the creation of conventional media and
provide the background in these disciplines needed to participate in the
multidisciplinary aspects of the design of games.

Program Educational Objectives

The CSC undergraduate program at NCSU prepares its B.S. graduates to
achieve the following career and professional goals:

1. To apply their knowledge of computer science problems encountered
   in their professional careers or in pursuit of advanced degrees.
2. To use evolving technologies, analytical thinking, and design to
   address contemporary issues.
3. To communicate well orally and in writing, interact professionally,
   and work effectively on multidisciplinary teams to achieve project
   objectives.
4. To uphold high ethical standards, including concern for the impact of
   computing on individuals, organizations, and society.
5. To engage in lifelong learning to enhance their professional
   capabilities.

Specific curriculum requirements are available online (https://
www.acs.ncsu.edu/php/coursecat/degree_requirements.php).
Minor in Computer Programming

The Department of Computer Science offers a Minor in Computer Programming to undergraduate majors in any field except Computer Science and Computer Engineering. The objectives of this minor are to:

1. Encourage students to combine computing with their own disciplines.
2. Promote quality in programming techniques.
3. Give graduating seniors with a minor in computer programming an added advantage in the job market.

The minor requires completion of 21 credit hours from the Computer Science core.

Scholarships and Financial Aid

The College of Engineering and the Department of Computer Science have a number of endowed and other scholarships available to students. There is also opportunity for financial aid sponsored by industry and for Co-op and internship positions. Interested students are invited to apply through the College of Engineering. In addition, the department organizes job-fairs and maintains a job matching service for our industrial partners (ePartners) and others who wish to hire our students for the summer or part-time during the academic year.

Facilities

North Carolina State University boasts one of the most extensive and sophisticated advanced high-performance communications infrastructures available for student use today. It ranges from a 10 Gbps research network, to wireless computing, to sensor networks. NC State University High-Performance Computing operations provide NC State students and faculty with entry and medium level high-performance research and education computing facilities and consulting support. Another service, called the Virtual Computing Laboratory (VCL), provides on-demand and reservation-based utility computing services from NC State’s extensive library of Engineering, Design, and Scientific software applications, as well as support for research projects. It is intended to address the increasing needs of local and distance students, faculty and researchers for virtualized resources by providing 24x7 access to advanced computing laboratory facilities through a variety of computer systems they own.

In addition, the Department of Computer Science has over 30 general purpose and specialized teaching and research laboratories, centers and other facilities that support its educational and research mission. These facilities are located in four buildings: Daniels Hall, Engineering Building II, Engineering Building III, and Montieth Research Center. Facilities range from introductory programming laboratories, to networking laboratories, to a games center, to an advanced visualization center, to a senior design center. At different stages of their education undergraduates will have the opportunity to use many of these facilities.

Department of Electrical and Computer Engineering

Box 7911, Engineering Building II
NC State University, Raleigh, NC 27606
Phone: (919) 515-2336

The professions of electrical engineering and computer engineering are concerned with the analysis, design, construction and testing of systems based on electrical phenomena. In contemporary society, electrical methods are used to communicate and store information, control equipment and systems, perform mathematical operations, and convert energy from one form to another. Frequently, two or more of these functions are important in the design of systems such as television, radio, telecommunications, computer, robots and intelligent machines, telemetry systems, solid-state electronics, vehicle safety systems, biomedical devices, environmental controls, electric machinery, and electric power generation and transmission facilities.

Computer engineering is a field in which digital techniques are used in system design. Low-cost solid-state microprocessors and memories permit computers to be widely incorporated in many different types of devices from toys to traffic control systems. To work effectively in this rapidly growing field, the computer engineer must understand both hardware and software techniques and must effectively use both in order to design, build and test complex digital systems. Both the electrical engineering and the computer engineering programs, which lead respectively to the degrees, Bachelor of Science in Electrical Engineering and Bachelor of Science in Computer Engineering, are accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

Program Educational Objectives

The Electrical/Computer Engineering Program graduates will be competent in the following areas:

1. Engineering problem definition and solution using engineering analysis, experimentation, and creativity based on sound mathematical and scientific principles.
2. Electrical/computer systems, components, processes, design requiring knowledge of the discipline, teamwork, communication, skills and an ability to work with a diverse set of constraints.
3. Productive engineering practice, research or management using technical, hands-on and professional knowledge, skills and initiatives required for success in the public, private or academic sectors.
4. Continuing education and learning on the job, experiential learning, leading and mentoring others and the ability to apply lessons learned to new situations.

Scholarships and Awards

Superior academic performance is recognized within this department in three ways: election of students to membership in the electrical engineering honor society, Eta Kappa Nu; awarding of merit scholarships; and presentation of awards to outstanding seniors. The department has one endowed merit scholarship for rising sophomores, the Eugene C. and Winifred Sakshaug Scholarship, and twenty-eight endowed scholarships which are usually awarded to juniors and seniors: William E. Clark, Elizabeth P. Cockrell, Eugene C. Denton, Virginia Stewart Easter Memorial, Ferrell Family, William and Tipton Gray, John and Ann Hauser, Llewellyn Hewett, William and Carol Highfill, Jessie Reid Holshouser, Jr, Charles Kenneth Little, L. A. Mahler, Robin & Susan Manning, Amelia N. Mita, Dewey Carr Ogburn Memorial Scholarship, Frank T. Pankotay, Ronald G. Pendred, Pratt Family, William DeRosset Scott III, E. Chester Seewald, Shruthi Sorra, Oracle, Fredrick J. Tischer, Herbert B. Walker, Robert S. Wolf, Simon B. Woolard, North Carolina Electric Membership Corporation, and William D. Stevenson, Jr., the latter two of which are for students studying electric power systems. The department also from time to time has scholarships provided by industrial organizations such as Duke Energy, Northrup Grumman, Cisco, Lockheed, Sensus and ABB. Academic merit is generally the primary requirement for these awards, but other characteristics, such as demonstrated leadership, may also be specified. In addition, the endowed William M. Cates Scholarship Program provides multiple scholarships for students having documented
and computer software. Both curricula have a required two semester
and to provide experience in designing and testing electronic hardware
Laboratory work is designed to demonstrate fundamental principles
computer systems, electronics, electromagnetics, and linear systems.
In the freshman year is followed in subsequent years by additional core
courses so that graduates are prepared for rapid technological changes
summer. A strong emphasis is placed on fundamental concepts in core
areas for group work and study. Inspiring a spirit of discovery, the Hunt
high-definition video walls, 3D computing and visualization space,
an innovative environment filled with technology-abled furniture,
access to electronic components, soldering tools, test instrumentation,
facitation equipment (circuit board and 3D printers).
In addition, nearby Engineering Building III houses a 24/7 public lab of
over 70 computers running a variety of operating systems and industry
standard software. This lab is available to all engineering students and
is staffed by trained student operators. A student-owned laptop platform
has been developed in the College of Engineering; combined with a
comprehensive wireless network and many remote computer services,
this program allows education to expand outside of traditional classroom
and laboratory facilities.
Nearby, the state-of-the-art James B. Hunt, Jr. Library gives students
an innovative environment filled with technology-abled furniture,
high-definition video walls, 3D computing and visualization space,
videoconferencing and telepresence facilities, and over 100 meeting areas for group work and study. Inspiring a spirit of discovery, the Hunt Library will help to produce the next generations of technology-savvy citizens, employees, researchers, and scholars.

Core Courses
The electrical and computer engineering curricula share core courses comprising a substantial portion of the first three years of study. Many of the core courses are offered three times a year in fall, spring, and summer. A strong emphasis is placed on fundamental concepts in core courses so that graduates are prepared for rapid technological changes common in the electrical and computer engineering professions. A comprehensive foundation in mathematics and the physical sciences in the freshman year is followed in subsequent years by additional core courses in mathematics, physics, electric circuit theory, digital logic, computer systems, electronics, electromagnetics, and linear systems. Laboratory work is designed to demonstrate fundamental principles and to provide experience in designing and testing electronic hardware and computer software. Both curricula have a required two semester

Curricula
In addition to the core courses described above, students in the electrical engineering curriculum take two foundational electives and four specialization electives in areas of their choice within the discipline and two technical electives that can be in either electrical engineering or selected engineering courses offered by other departments. Beyond the core, students in the computer engineering curriculum take courses in discrete mathematics, data structures, embedded systems, and complex digital systems, in addition to four specialization electives in areas of their choice and one technical elective. For both curricula, a variety of elective courses are offered in communications, computational intelligence, controls, digital signal processing, digital systems, nanotechnology, mechatronics, microelectronics, networking, robotics, and VLSI design. There are typically a dozen or more of these courses offered each fall and spring semester and two or three available each summer.

Specific curriculum requirements are available online (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php).

Individualized Degree Program in Engineering
Page Hall, Room 118
Phone: (919) 515-3263
The B.S. in Engineering degree offers an individualized academic program for those exceptional students who have academic and career goals that cannot be accommodated by the other engineering degree programs. Before being admitted into the program, students must complete the freshman year, have at least a 2.5 grade point average, have completed the requirements for admission into an engineering degree program and have a plan of study approved.
For more information, contact the Assistant Dean for Academic Affairs at (919) 515-3263.
Specific curriculum requirements are available on the Registration and Records website (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php).

Bachelor of Science in Engineering - Mechatronics Concentration
Joint Engineering Degree with University of North Carolina at Asheville (http://www.unca.edu/ncsu_engr)
Phone: (828) 251-6640
The Joint Mechatronics Engineering curriculum (JEM) combines the best that two nationally recognized universities have to offer. From NC State University comes the engineering component comprising course work from the Departments of Mechanical and Aerospace Engineering (MAE), Electrical and Computer Engineering (ECE), and mechatronics courses taught by NC State University faculty on the campus of the University of North Carolina at Asheville. Hands-on laboratories are integral to the engineering course work. From the University of North Carolina at Asheville comes a Humanities and Social Science component with a rich
liberal arts foundation. As an NC State site-based engineering program, students must attend classes on the campus of UNC Asheville. Transfer students should contact the program office for information about the transfer of courses from other educational institutions.

Mechatronics engineering focuses on the precision control of mechanical and machine systems. In today's modern engineering systems, control is achieved electronically through sensors, actuators and microprocessors. The marriage of modern control systems with mechanical devices is key to the design and development of high-performance engineering systems. Just a few examples of computer-controlled mechanical systems are robots, engine-fuel systems, hybrid automobiles, autonomous aerospace vehicles, stair-climbing wheelchairs, garage door openers and alternative power generation systems. Through modern mechatronics engineering, new avenues of thinking and design can greatly enhance the utility, performance, and efficiency of modern machinery.

Program Educational Objectives

Within a few years of graduation, successful alumni of the Joint NC State - UNC Asheville BSE - Mechatronics Concentration degree should:

1. Attain productive professional careers in mechatronics engineering or related fields.
2. Function in the workplace with appropriate professional and ethical responsibilities.
3. Make decisions with accountability for the social and environmental impact of their engineering practices.
4. Interact effectively with a diversity of individuals while viewing their own work in the broader context of our global society.
5. Attain technical excellence by engaging in life-long learning.


Specific curriculum requirements are available on the Mechatronics webpage (http://www.engr.ncsu.edu/mechatronics/joint.php).

Edward P. Fitts Department of Industrial and Systems Engineering

Daniels Hall, Room 400
Phone: (919) 515-2362
Visit the ISE website (http://www.ise.ncsu.edu)

Ranked in the top 10, the Edward P. Fitts Department of Industrial and Systems Engineering (ISE) offers an ABET accredited undergraduate B.S. program in Industrial Engineering.

What is Industrial & System Engineering?

Industrial engineers are problem solvers! We analyze processes and ask “how can we make these processes faster, better, and cheaper?” ISEs play a pivotal role in end to end business operations from product development to product and service delivery. It is this holistic view that makes ISE unique. We rely heavily on gathering and evaluating data to help make decisions that are based on statistical and engineering methods. Here are some of the tasks that ISEs lead in industry today:

- Assess the feasibility of manufacturing a new product with existing technologies, resources, and capacity or develop new ways to make products including automation
- Create and monitor quality plans that ensure that faulty products will not be shipped to the customer.
- Determine improved methods of scheduling patients for surgery that decreases patient wait time and surgeon’s overtime.
- Model a retail chain’s inventory and supply chain methods to improve on-time deliveries.
- Develop computer simulation models to design and control large complex manufacturing, supply chain, or service delivery systems.
- Design controls in an airplane cockpit that are Human-centered.

As you can see ISEs enjoy the freedom to explore almost any industry. The career paths that you can take with ISE are virtually limitless! Watch these videos to hear about ISE careers: ISEs in action! (http://www.ise.ncsu.edu/undergraduate)

Program Educational Objectives

The program educational objectives of the ISE department are to produce graduates capable of world-class performance in the following areas:

1. Applying the discipline’s body of knowledge to the design and management of systems, products and processes by working effectively with multiple constraints, understanding the importance of time and cost;

2. Contributing meaningfully to team efforts in the workplace, understanding the economic, societal, and ethical impacts of their decisions, and communication effectively with all stakeholders in the decisions; and

3. Adapting to changes in technology and our global society over the course of their professional lives by continuous learning through varied work assignments, advanced degrees, professional training programs and independent study.

The Bachelor of Science in Industrial Engineering is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

Specific curriculum requirements are available online (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php).

Curriculum

Throughout the curriculum students will develop a breadth of knowledge in all of the ISE focus areas resulting in a broad base of knowledge and skills. There is a pervasive thread throughout the curriculum on the measurement, design, and continuous improvement of production and service systems. The result is a data-driven, efficiency-focused engineer that is highly attractive in many industry segments. Our courses are designed to be hands-on whether that is in our state-of-the-art laboratories or using the latest software applications to solve real problems. The senior design capstone course is designed to give students an opportunity to apply what they have learned in the classroom to solve an industry-sponsored project. In addition to ISE courses, students take a wide variety of science, engineering, math, and statistics courses to form a well-rounded education.

Opportunities

Industrial and Systems engineers can be found everywhere! According to the Bureau of Labor Statistics, ISEs will be highly sought after in the coming decade. This is not surprising given the cost and efficiency
pressure on both manufacturing and service sectors. Industrial engineers are hired by virtually all segments of industry. They may work in hospitals and healthcare consulting firms to make healthcare delivery more cost effective as well as in high tech manufacturing industries. Another area in which ISEs play a pivotal role, is in successful integration of global business partners. As companies continue to seek a global presence, industrial engineers will be involved in the design of new supply chain networks or qualification of manufacturing processes/facilities. Given the level of impact made by ISEs in industry today it is not surprising that our current job placement rate is among the highest in the College of Engineering, above 90% within 3 months of graduation. Many ISEs rise to the management ranks throughout the career and there have been several ISEs who have become CEOs: Tim Cook (Apple Inc.), Mike Duke (Walmart) & Charles Holliday (Dupont) to name a few.

Minor in Industrial Engineering
The minor in Industrial Engineering is designed to provide undergraduate engineering students and other science majors in curricula other than Industrial Engineering with the fundamentals of industrial engineering necessary for advanced study in the discipline and/or employment in industrial engineering. Students minoring in Industrial Engineering will learn basic principles of ISE as well as more advanced principles in at least one specific area of interest.

Admissions and Certification of Minor
The minor must be completed no later than the semester in which the student expects to graduate from his or her degree program. Paperwork for certification can be found in 410 Daniels Hall and should be completed no later than during the registration period for the student’s final semester at NC State.

For more information contact Dr. Vila-Parrish: arvila@ncsu.edu or (919) 515-0605.

Admissions and Certification of Minor
The minor must be completed no later than the semester in which the student expects to graduate from his or her degree program. Paperwork for certification can be found in 410 Daniels Hall and should be completed no later than during the registration period for the student’s final semester at NC State.

For more information contact Dr. Vila-Parrish: arvila@ncsu.edu or (919) 515-0605.

Accelerated Baccalaureate/Masters (ABM) Program
This program will allow exceptional undergraduate students to complete both undergraduate and graduate degrees at an accelerated pace. The student is allowed up to 12 credit hours to be counted towards both the undergraduate and graduate degrees.

Requirements
- Students must have completed a minimum of 75 credit hours and up to a maximum of 96 credit hours by the end of the current semester (includes transfer credits).
- Students must have earned a GPA of at least 3.5 for all courses and 3.5 for all Industrial Engineering courses.
- Students must have satisfied all prerequisite requirements for 400 level courses.
- A letter of recommendation from the undergraduate teaching adviser identifying the applicant as a participant in the ABM program should accompany the application as well as the course numbers and titles of the 12 credit hours to be used for both the bachelor’s and master’s degree programs.

Department of Materials Science and Engineering
Engineering Building I, Room 3002
Phone: (919) 515-2377
Visit the Materials Science and Engineering website (http://www.mse.ncsu.edu)

Our world is driven by the materials that are currently available. Millions of everyday objects and technologies are made better because of a new and improved material. The automobile industry has lighter, impact-resistant car bodies. Textile companies have stronger, brighter fibers. Of course, we have all benefited from the versatile, inexpensive polymeric materials commonly known as plastics. In fact, many of today's industrial problems await materials solutions: electrical engineers ask for better semiconductors, and computer technology demands material systems that store more and more information. Even parts of the human body are being replaced by specially designed biologically compatible materials. Materials Science and Engineering faculty and students at NC State are working on these and related problems right now. The Department of Materials Science and Engineering at NC State has 5 major research focus areas, which include Structural Materials, Electronic/Optical/Magnetic Materials, Soft Materials and Biomaterials, Structural Characterization, and Computational Materials Science.

What is Materials Science and Engineering?
Materials science and engineering deals with the behavior of any material and its relationship to structure on all levels: atomic structure, nanostructure, microstructure, and macrostructure. Structure determines the properties of matter: how materials act, how materials react, and how materials perform in different environments. Through an understanding of these structure-property relationships, materials engineers can develop new materials or adapt existing ones to meet the design and economic requirements that ultimately advance industry, technology, and society.

Materials scientists and engineers are often asked to:
- develop new materials and/or improve existing materials;
- develop new processing and manufacturing procedures for materials;
- assist with materials selection for parts or systems;
- conduct failure analysis to determine what went wrong and why;
- conduct structural analysis of new materials to determine their properties;
- determine how a material performs in a specific environment.

What is the Curriculum Like?
The materials engineer must understand the wide range of phenomena that occur in all classes of materials: metals, polymers, ceramics, and
composites. The MSE curriculum includes fundamental courses in thermodynamics, kinetics and structure, followed by more applied courses that cover mechanical, thermal, electrical, magnetic and optical properties of materials. Two laboratory courses introduce students to analytical methods used to characterize the structure of materials at all length scales and to measure properties of all classes of materials. Cutting-edge technologies in materials science and engineering such as nanotechnology, biomaterials, computer modeling and forensics (materials degradation and failure analysis) are covered. Five technical electives are included, which allow students to select from a broad range of courses in materials processing, engineering, chemistry, physics, mathematics and other disciplines. The flexibility afforded by these technical electives allows students to customize their education to prepare them for careers in industry or for graduate school.

The two-semester capstone senior design sequence provides a bridge between concepts learned in the classroom and practical application of these concepts in an industrial setting. Teams of students work on real-world materials problems supported by local industrial sponsors.

The materials science and engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org, and leads to the degree Bachelor of Science in Materials Science and Engineering. In addition the the base curriculum in Materials Science and Engineering, the department also offers curriculum concentrations in biomaterials and nanomaterials.

An accelerated 5-year BS/MS program is available for advanced study and further specialization. Graduate degrees are also offered (consult the Graduate Catalog [http://www.ncsu.edu/grad/catalog]).

How Does MSE at NC State Compare to Other Departments?

The mission of the NC State Department of Materials Science and Engineering is to provide students with a sound materials science and engineering education, advance the understanding and application of scientific principles, enhance economic development, and improve the quality of life of our citizens through teaching, research, and outreach programs.

Materials Science and Engineering at NCSU is a small and friendly department, and we are consistently ranked in the top 20 nationally by US News and World Report. Students, professors and professional staff all get to know each other. There is plenty of opportunity for personal attention, for learning, for professional growth and for social gathering.

Program Educational Objectives

With the background knowledge in science, engineering, critical thinking and teamwork provided by the MSE curriculum, our alumni are fully prepared to achieve one or more of the following within five years of graduation:

- Practice materials engineering in academic, industrial, government or entrepreneurial organizations.
- Earn an advanced degree such as MS, PhD or MBA, leading to a career in academia, research and development, or technical management.
- Be promoted into leadership roles in their chosen career.

- Demonstrate by their participation in technical societies, community service, and professional activities, a high degree of service and ethical responsibility to their professional field and the community.

Minor in Materials Science and Engineering

The Materials Science and Engineering minor is designed to provide undergraduate engineering and science majors, in curricula other than MSE, with the fundamentals of modern materials science and engineering. Completion of the MSE minor requires a minimum of 15 credit hours, which include 9 hours of required courses and at least 6 hours of elective courses. Further information regarding a Minor in Materials Science and Engineering is available from the MSE Director of Undergraduate Programs (http://www.mse.ncsu.edu/profile/caparzel).

Department of Mechanical and Aerospace Engineering

Engineering Building 3, Room 3002
Phone: (919) 515-2365
Visit the Mechanical and Aerospace Engineering website (http://www.mae.ncsu.edu)

The Department of Mechanical and Aerospace Engineering is the largest engineering department at NC State, among the largest in the nation, and offers doctor of philosophy, masters, and undergraduate degrees, and on-line delivery of graduate courses for remote students.

The undergraduate curricula in mechanical engineering and in aerospace engineering are nearly the same for freshmen and sophomores but then differ for juniors and seniors. The freshman and sophomore courses provide the student with an understanding of the basic principles of engineering - statics, dynamics, solid mechanics, and thermodynamics.

In the junior and senior years, the courses become more specialized and end with a capstone design course in which student teams develop an engineering system in response to industry-sponsored requirements. Detailed information is available online.

Aerospace

Aerospace engineering applies science and engineering principles to design, development, manufacture, and operation of aerospace systems and vehicles. Aerospace vehicles include aircraft such as low-speed propeller-powered aircraft, remotely autonomously piloted vehicles, micro air vehicles, hovercraft, and helicopters and spacecrafts such as rockets, space stations, and planetary rovers. Aerospace engineering not only involves design, development, manufacture, and operation but also considers environmental, economical, ethical, and social issues.

The undergraduate curriculum provides the student with knowledge of aerodynamics, aerospace materials, structures, propulsion, flight mechanics, and vehicle stability and control plus knowledge of selected topics in orbital mechanics, space environment, altitude determination and control, telecommunications, and space structures. The program educates students to define, formulate, and solve aerospace engineering problems, to function in multi-disciplinary teams, and to communicate effectively.

Aerospace engineering students gain experience with low-speed and high-speed wind tunnels and structural and material facilities for testing prototype models. A prominent feature of the program is the year-long senior design experience in which students choose from two possibilities: (1) design, construct, and flight-test a fly-by-wire aircraft; a unique 40-
Aerospace engineering undergraduates are employed by the aerospace industries and other industries with similar technical problems. Many of our students enter graduate school after which they are employed by these same industries and by government laboratories such as NASA, NAVAIR, and the Air Force.

### Mechanical

Mechanical engineering applies mechanical, thermal, and fluid principles to research, design, development, testing, manufacture, and operation of products and systems. Mechanical engineering is the broadest of the engineering programs, providing a technological foundation that serves societal needs in energy, health, safety, and all walks of life. Mechanical engineers solve problems dealing with energy and environmental systems (alternative fuels and renewable technologies), advanced materials and manufacturing (precision metrology, smart materials, and auto-adaptive materials), robotics and sensor technologies (opto-mechanical systems, MEMS, energy harvesting, human-centric and bio-inspired intelligent systems), and transportation (automotive and high speed rail).

In addition to taking strong foundational courses, mechanical engineering students gain experience in experimental laboratories for measurement and data analysis, performance evaluation of thermal systems, and testing and analysis of mechanical components. The senior design experience is a distinctive joint departmental-industry effort in which students solve industry-sponsored problems by designing, building, and testing prototype machines with the support of facilities for machining and electronics. Many of the students are involved in the department’s student clubs, such as its Eco car and SAE car clubs that compete internationally and regularly place in the top 10.

Because of the discipline’s wide breadth, mechanical engineering students have a wide variety of employment opportunities. Undergraduate students enter engineering fields that deal with, to varying levels, design, development, manufacturing, plant operation, testing and experimentation, consulting, sales and service. The employers come from industry, government and service organizations. Many of the undergraduate students go on to graduate school to pursue advanced degrees in engineering, science or business, as well as professional degree programs such as medicine, accounting and law.

### Honors Program in Mechanical and Aerospace Engineering

Students enter the mechanical and aerospace honors program by invitation. Students in these programs participate in special educational experiences involving deeper investigations into subjects and research projects.

### Bachelor of Science in Engineering - Concentration in Mechanical Engineering Systems

The NC State Mechanical Engineering Systems (MES) BSE program is a site-based program located on the campus of Craven Community College in Havelock, North Carolina. Students in the program earn a Bachelor of Science in Engineering with a concentration in Mechanical Engineering Systems. Upon graduation from the MES program, students have the qualifications to apply for any job seeking mechanical engineering applicants.

### Opportunities

In the MES program, you will receive a solid foundation in mechanical engineering principles including structural mechanics, materials, fluid mechanics, dynamics, vibrations, controls, thermal sciences, mechanical design, and thermal design. You will also receive training in the formal systems engineering approach to the design and realization of integrated systems. Your training in formal systems engineering gives you the ability to understand and work through the broad complex issues involved with integrated systems. Your training in mechanical engineering principles gives you the skill and confidence required to understand and solve detailed technical problems. The unique combination of these skills allows you to be well prepared to meet the technical and non-technical challenges of today’s engineering workplace.

### Curriculum

MES students are drawn from a diverse population that includes not only the traditional college student, but also military personnel and civilian staff of FRC-East.

The 10 mechanical engineering courses in the MES program are taught by the nationally recognized NC State MAE faculty in Raleigh and delivered to the MES students in Havelock via interactive high-definition video teleconference.

Local NC State faculty teach the Systems Engineering content, conduct all laboratory experiences, and direct students in the two-semester capstone design experience where they are partnered with an industry sponsor to design and build a solution to a real-world problem. Hands-on laboratory exercises allow students to explore and experience theoretical concepts learned in their courses and practice important modern skills such as manual and computerized measurement techniques, data analysis, design of experiments and technical communications.

The MES program is located within a short distance of the Naval Air Systems Command’s Fleet Readiness Center-East, Cherry Point (FRC-East). FRC-East is North Carolina’s largest industrial employer east of Interstate Highway I-95 and the MES program takes advantage of the synergies afforded by its close location and relationship with the more than 500 engineers working at FRC-East.

The MES program was evaluated under the criteria for Mechanical Engineering Programs and is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

### Admissions

Students in the MES program typically begin by taking their general education courses such as physics, chemistry, calculus, and the humanities at one of North Carolina’s Community Colleges or from another approved university program. Once students satisfy all transfer requirements, they apply for acceptance into the College of Engineering at NC State as a transfer student majoring in the MES program. Current NCSU engineering students can pursue the MES program if they are willing to relocate to the Havelock area. For more information on admissions, click here (http://www.engr.ncsu.edu/mes/enroll-bse.php) or go to www.engr.ncsu.edu/mes.

### Program Educational Objectives

### Program Educational Objectives

www.engr.ncsu.edu/mes
Alumni of the BSE with concentration in mechanical engineering systems will attain the following objectives within 3-5 years of graduating:

1. Be engaged in the professional practice of engineering or be enrolled in graduate school.
2. Establish themselves as problem solvers in the workplace through the practical application of engineering and systems knowledge and skills.
3. Function effectively in a professional environment by utilizing written and oral communication, teamwork, project management and leadership skills and their ability to view their own work in a broader context.
4. Continuously improve and expand their technical and professional skills through formal study, as well as through informal means.

Click here (http://www.engr.ncsu.edu/mes) for more information on the MES Program or go to www.engr.ncsu.edu/mes.

Department of Nuclear Engineering

Burlington Engineering Laboratories, Room 3140 Phone: (919) 515-2301
Visit the Nuclear Engineering website (http://www.ne.ncsu.edu)!  

Nuclear engineering is concerned with the engineering aspects of the control, release, and utilization of nuclear energy from both fission and fusion nuclear reactors. Nuclear reactors serve many functions: they serve as heat sources for electric power plants and are used in the production of radioactive isotopes for a variety of peaceful applications. Nuclear methods are applied in medical diagnosis and treatment, scientific research, and the search for new resources. The nuclear engineering program educates individuals in scientific and engineering principles essential for effective and productive contributions in industrial, university and government service. The Department of Nuclear Engineering has a national graduate ranking of #5 among all nuclear engineering programs. The undergraduate program continues to be highly respected by the nuclear industry.

Opportunities

Nuclear power reactor operation continues with over one hundred reactors operating in the nation, increasing our reliance upon nuclear energy as a substitute for energy from fossil fuels. Development of advanced fission and fusion reactors offers the potential of vast new energy sources. Industrial and medical applications of radiation continue to increase in diverse industries. Demand for nuclear engineers is on the rise within the electric power industry and national laboratories, naval reactors, and other industries. According to the National Society of Professional Engineers, nuclear engineers are among the top five best compensated of the engineering disciplines.

Scholarships and Awards

Several special scholarships exist for NC State nuclear engineering students, including the Duke Energy, Institute for Nuclear Power Operations, American Nuclear Society - national, U.S. Department of Energy and the U.S. Nuclear Regulatory Commission scholarships. A special department fund supports scholarships for exceptional upperclassmen. NC State nuclear engineering students have received special recognition awards at the Undergraduate Research Symposium and have gained national recognition by several times receiving the Student Design Award of the American Nuclear Society. NC State nuclear engineering students are also frequent recipients of nationally awarded fellowships.

Facilities

Facilities for nuclear education include a nuclear research reactor (PULSTAR), which can be operated at a steady state power of 1 MW; radiation detection laboratories; nuclear materials laboratory; thermal hydraulic laboratory; prompt gamma facility; neutron activation analysis laboratory; radio-chemistry laboratories; neutron radiography unit; positron facility; ultra cold neutron source; neutron diffractometer; numerous computer facilities including, departmental computer workstations, College of Engineering EOS engineering workstations, microcomputers; reactor simulation laboratory; plasma generation and diagnostics laboratory, atmospheric plasma science laboratory, and plasma launchers laboratory.

Mission

The Department of Nuclear Engineering has four primary missions:

1. Provide a quality education at both the undergraduate and graduate levels to students who desire to pursue careers in nuclear science and engineering.
2. Develop research programs in areas of emphasis related to applications of nuclear science and engineering.
3. Assist industries and government in North Carolina, nationally and internationally in their efforts to apply these nuclear technologies to the betterment of the economy and the environment - in a safe, effective, and innovative manner.
4. Enhance, promote, and utilize the PULSTAR research reactor and associated facilities in an exemplary manner, leading to national recognition as a premier 1 MW Nuclear Reactor Program dedicated to research, teaching, and extension.

Program Educational Objectives

Consistent with the Department of Nuclear Engineering’s mission, the department has developed the following objectives for undergraduate education.

The Nuclear Engineering program is preparing its graduates for:

1. A track record of solving technical challenges facing the field of nuclear engineering through the detailed process of engineering design and the advance of nuclear engineering practice and research;
2. A reputation of adhering to the highest professional standards in the field, holding both the societal and environmental impact of their field’s practices in the highest regard;
3. Written and oral communication skills that are highly effective in a diverse, cross-disciplinary, and global community of colleagues and stakeholders; and
4. The professional responsibility of continued self-improvement and education through professional licensing, graduate and professional education, and continued lifelong learning.

Curriculum

Nuclear engineers work in nuclear systems research, design, development, testing, operation, environmental protection, and marketing. The Bachelor of Science program prepares graduates for positions in industry, national laboratories, or for graduate study
Textile Engineering Program

Textile Building/Centennial Campus, Room 3270

The Textile Engineering (TE) Program at North Carolina State University is administered jointly by the College of Textiles and the College of Engineering and is an interdisciplinary curriculum drawing on diverse science and engineering principles. Textile engineering students develop a unique background, through undergraduate research, summer intern experiences, and design projects ranging from artificial blood vessel development to the design of novel high-tech sporting equipment. Textile engineers also design computer information systems that can integrate a worldwide distribution program eliminating a company’s reliance on regional stockpiles or streamline an industrial process using Six Sigma quality saving a company millions of dollars. The program offers small class sizes with personal attention from faculty. With the focus on interdisciplinary research, the opportunities for textile engineers have never been brighter.

Opportunities

Textile engineers, teaming with chemists, physicists, materials scientists, and other engineers are designing new polymers, fibers, and textile structures to revolutionize the future of materials. Whether it be for personal protective garments such as bullet proof vests and Gore-tex® or materials used in the next generation space shuttle and the stealth bomber, textile engineers are developing products that are stronger, lighter, and more durable than current materials. Textile engineers are employed in a wide variety of industries that include aerospace, automotive, chemical, composites, management consulting, fiber processing, medical devices, manufacturing and retail, and textile processing.

The TE Program provides a fundamental engineering degree with a working knowledge of the very large textile industry as well as its allied industries. We have our own career planning and placement center to assist students in identifying and selecting internships and permanent careers. Historically, TE graduates have had nearly 100% placement into graduate school or full time employment with starting salaries among the highest at N.C. State University. Compared to the rest of North Carolina State University, the College of Textiles has the highest percentage of students participating in scholarship programs. Indeed, over 50% of all Textile Engineering students receive scholarship support! Owing to the size of the program, many of our undergraduate students participate in research with our world renowned faculty further providing financial assistance as well as professional growth. Almost all of our textile engineering students participate in summer internships. Most of our graduates select jobs that are located in the Southeast, but others who desire to work in other regions of the country have opportunities to do so. Our graduates work in the biomedical industries on the east and west coasts and in Chicago, the automotive industry in Michigan, the aerospace industry in Texas, as well as large apparel and retail companies in Oregon, Maryland, California, Utah, Ohio and North Carolina.

Curriculum

The TE program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org. The TE program has three options for the Bachelor of Science in Textile Engineering: Option I, Option II, and Option III. The program provides the educational foundation to prepare for the Associate Certified Textile Professional (ACfTP) examination and for the American Society of Textile Engineers (ASTE) certified status. It also provides a broad foundation to prepare students for graduate work in the field. The program also provides opportunities for internship, research, and study abroad. The TE program provides the opportunity for students to select from a wide range of courses in the College of Engineering and the College of Textiles as well as other colleges at the university to meet their individual educational goals. The concentrations emphasize Information Systems and Technology, Biomedical Product Engineering, and Materials Science and Engineering.

Educational Objectives

The Textile Engineering Program of the Department of Textile Engineering, Chemistry and Science is committed to instill a strong academic program whereby graduates, within the first few years after graduation are prepared for the following accomplishments:

1. Recognized contributions in the workplace that involve creative and critical thinking in applying the discipline’s body of knowledge and for tackling contemporary issues and engineering challenges that face our global society;
2. A reputation of problem solving in a professional, ethical and safe manner;
3. Established communication and teaming skills in a professional environment; and
4. Evidence of continuous learning through seeking educational and developmental opportunities and by adapting to ever-changing economic, social, and technological environments.

Specific curriculum requirements are available online (http://www.ncsu.edu/grad/catalog).
College of Humanities and Social Sciences

Box 8101 Raleigh, NC 27695-8101

The College of Humanities and Social Sciences offers programs of study that lead to baccalaureate and advanced degrees in the disciplines of the humanities and social sciences. The college also offers courses in these disciplines that are required in all undergraduate programs. In this way the university provides its students the opportunity to prepare for a full life in the professions and occupations that require intellectual flexibility, broad knowledge, and a basic comprehension of human beings and their problems.

The college is comprised of nine departments or schools: Communication, English, Foreign Languages and Literatures, History, Philosophy and Religious Studies, School of Public and International Affairs, Psychology, Social Work, and Sociology and Anthropology. Interdisciplinary programs are administered through Academic Affairs in the college Dean’s Office.

The college offers undergraduate majors in: Anthropology; Arabic Language and Culture; Arts Studies; Asian Language; Communication; Criminology; English; Foreign Language Education; French; German Studies; History; Interdisciplinary Studies; International Studies; Philosophy; Political Science; Psychology; Religious Studies; Science, Technology and Society; Social Work; Sociology; and Spanish. In addition, special options or concentrations are available within some of the major programs:

- Africana Studies
- American Politics
- Communication Media
- Creative Writing
- Ethics
- Film
- International Politics
- Interpersonal, Organizational & Rhetorical Communication
- Language, Writing and Rhetoric
- Law and Justice
- Literature
- Logic, Representation & Reasoning
- Philosophy of Law
- Public Policy
- Public Relations
- Teacher Education – option available in English, French, Spanish, and social studies (history)
- Women’s and Gender Studies

Degrees granted include the Bachelor of Arts, Bachelor of Science, Bachelor of Social Work, Master of Arts, Master of Fine Arts, Master of Science, and Doctor of Philosophy, as well as professional degrees in political science and sociology.

Academic Minors

The College of Humanities and Social Sciences offers 41 minors:

- Africana Studies
- American Literature
- Anthropology
- Arts Studies
- Chinese Studies
- Classical Studies
- Cognitive Science
- Creative Writing
- Criminology
- English
- Ethics
- Film Studies
- French
- German
- Health, Medicine & Human Values
- Hindi-Urdu
- History
- International Studies
- Italian Studies
- Japanese
- Japan Studies
- Journalism
- Law and Justice
- Linguistics
- Logic and Methodology
- Middle East Studies
- Native American Studies
- Nonprofit Studies
- Philosophy
- Political Science
- Portuguese Studies
- Psychology
- Religious Studies
- Russian Studies
- Science, Technology and Society
- Social Work
- Sociology
- Spanish
- Technical and Scientific Communication
- Women’s and Gender Studies
- World Literature

Dual Degree Programs

Benjamin Franklin Scholars Program

The Benjamin Franklin Scholars program, sponsored jointly by the College of Engineering and the College of Humanities and Social Sciences, allows a select group of highly motivated students to simultaneously pursue bachelor’s degrees in both engineering and humanities or social sciences, producing students with a broad training uniquely equipping them for the challenges of today’s world. Students in this program can combine any major in the College of Humanities and Social Sciences (plus economics) with any major in the College of Engineering. This program, now entering its twenty-seventh year, has produced individuals who use their engineering training in a broad range...
of settings and jobs: in industry, in academia, in government, working as engineers, lawyers, physicians, and policy analysts, among others.

There are three entry points into the program. A limited number of newly admitted freshmen are invited to apply to join the program in the April of their senior year of high school, based on SAT scores. During New Student Orientation the summer before the freshman year, all new entering freshmen are invited to attend an information session about the program and apply to join. Thereafter interested students can seek admission through an individual consultation with the director.

The program has dedicated scholarship money associated with it, and students who have completed the Franklin intro course, have officially declared their Engineering and Humanities and Social Sciences majors and who have a 3.0 or above GPA are generally eligible for scholarship support. The time required to complete both degrees depends on a variety of factors, including incoming AP credit, semester course load, use of summer school, and Humanities and Social Sciences degree sought. The program can be completed in 4-5 years, with five years being typical.

The student led section of the program, the Franklin Council, arranges a wide variety of social, service, and academic events throughout the year.

For more information, contact the director of the program, Dr. Ross Bassett, Department of History, College of Humanities and Social Sciences, ross@ncsu.edu, 919-515-2231, 478 Withers Hall, or visit the Franklin Scholars Program homepage (https://ids.chass.ncsu.edu/dual/franklin.php).

Thomas Jefferson Scholars Program

The Thomas Jefferson Scholars Program is a joint program of the College of Agriculture and Life Sciences and the College of Humanities and Social Sciences. Participants earn two bachelor's degrees: one concentrating in an area of agriculture or life science and one in an area of humanities or social science. Students can choose any major in each college, to meet individual interests and career goals. The purpose of the program is to produce potential leaders in agriculture and the life sciences who have not only technical expertise but also an appreciation for the social, political, and cultural issues that affect decision-making. The program includes special classes and guest lecturers for Jefferson Scholars, travel and other enrichment experiences, and a variety of social and service activities.

Once a student applying for admission to NC State has been accepted, the Program invites students of high achievement to apply for the Jefferson Scholars. Applicants come for an interview in March, and a limited number of entering freshmen are chosen to participate in the Jefferson Scholars Program. Successful participants receive scholarship support after the sophomore year.

For more information, contact either faculty mentor, Dr. Derek Aday, College of Agriculture and Life Sciences, 919-515-7484, ddaday@ncsu.edu (chad_jordan@ncsu.edu); or Dr William Kimler, History, College of Humanities and Social Sciences, 919-513-2238, kimler@ncsu.edu. Visit the Jefferson Scholars website (http://harvest.cals.ncsu.edu/jefferson-scholars) for details about our activities, students, and courses.

Alexander Hamilton Scholars Program

The Alexander Hamilton Scholars Program permits students to simultaneously earn a B.A. in International Studies and either a B.S. in Accounting, a B.S. in Business Management, or a B.S or B.A. in Economics.

Key elements of the Alexander Hamilton Program include foreign language study to at least the 300-level, a Management capstone course (economics seminar or business policy and strategy) with a strong global orientation, a senior thesis in International Studies, and several additional courses on topics such as international economics or marketing, global politics, and intercultural communication. Each Hamilton scholar is required to complete at least one study abroad program.

Hamilton scholars participate in special programs throughout their enrollment that are designed to increase their exposure to leading-edge management practices, international businesses, and foreign cultures. These programs will include activities such as special lectures and networking events with international corporate partners, field trips to international companies with a local presence, charity fund-raising and community service projects, mentoring of foreign business students, and Scholars banquets. For additional information about the Alexander Hamilton Scholars Program, contact Mr. Robert Sandruck, robert_sandruck@ncsu.edu, 515-5565, Director of Global Programs, Poole College of Management, 2178 Nelson Hall, or Dr. Seth Murray, seth_murray@ncsu.edu, 515-0450, International Studies, College of Humanities and Social Sciences, Room 106 in the 1911 Building. Visit the Hamilton Scholars Homepage (https://poole.ncsu.edu/undergraduate/global/alexander-hamilton-scholars-program) for more information.

Cooperative Education

Cooperative Education in humanities and social sciences seeks to broaden the student’s intellectual horizons and at the same time to provide an introduction to the world of business, industry, government, or finance in preparation for a career after graduation. In this program, the freshman and senior years are usually spent on campus while the sophomore and junior years are devoted either to alternate periods of on-campus study and full-time work experience or part-time work and study on a continuous basis. The student is paid for work experiences by the employer. Ordinarily the program takes five years to complete, but those who are willing to attend summer school or take on a summer co-op assignment can finish in four years. Transfer students are eligible, and all interested students are urged to apply early in the academic year. The program is also open to graduate students although less time is required on work assignments.

Further information may be obtained from Cooperative Education, 2100 Pullen Hall, or at (919) 515-2396.

Honors Program

Each department in the college offers an honors program designed to encourage outstanding students to develop their intellectual potential to the fullest extent possible through individualized study, special seminars, and close association with faculty members in their major field.

Scholarships

In addition to the university-wide awards available, the College of Humanities and Social Sciences offers a limited number of merit and need-based scholarships. For further information contact Dara Leeder, Director of Student Recruitment and Retention, College of Humanities and Social Sciences, (919) 515-3638.
Folger Institute

North Carolina State University is a member of the Folger Institute of Renaissance and Eighteenth-Century Studies, a unique collaborative enterprise sponsored by the Folger Shakespeare Library in Washington, D.C., and 20 universities in the Middle Atlantic region. Each year the institute offers an interdisciplinary program in the humanities—seminars, workshops, symposia, colloquia, and lectures. Admission is open to faculty and students of North Carolina State University, and a limited number of fellowships are available through the campus Folger Institute Committee.

Department of Communication

The Bachelor of Arts in Communication program provides opportunities for study and training in human communication for professionals entering business, industry, media, non-profit organizations, or government service. Today, many organizations are seeking graduates with demonstrated competencies in human communication to fill positions that require constant and skillful contact with a wide variety of internal and external publics. Depending on their area of specialization, graduates may find employment opportunities such as communication consultants, media specialists, trainers, public relations or corporate communication specialists. Many graduates choose to enter graduate or law school.

Students who successfully complete the undergraduate Major in Communication will gain expertise in the following six curricular areas:

- Communication as a Field: Communication as a phenomenon, as an academic discipline, as a system of processes and practices, and as a profession.
- Theory: Theoretical analysis of communication processes and practices.
- Research Methods: Research methods as they relate to and inform communication processes and practices.
- Diversity & Globalization: Multiple cultural contexts and global processes and their implications for communication processes and practices.
- Ethics: Critical thinking about ethical problems in communication.
- Communication Competencies: Targeted communication skill areas and competencies.

Programs of Study

The Communication major calls for the successful completion of at least 39 semester credit hours of Communication (COM) courses. All majors must take:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 230</td>
<td>Introduction to Communication Theory</td>
<td>3</td>
</tr>
<tr>
<td>COM 240</td>
<td>Communication Inquiry</td>
<td>3</td>
</tr>
<tr>
<td>COM 250</td>
<td>Communication and Technology</td>
<td>3</td>
</tr>
</tbody>
</table>

Preferably one-at-a-time and in sequence, and earn a “C-” or better in each course. In addition, all majors must take

- COM 110 Public Speaking
- or
- COM 112 Interpersonal Communication

(dpending upon their concentration). Students select one of the three departmental concentrations in which they take the remaining credit hours in the major. The concentrations are:

Communication Media

Study the history and theory of communication media and strategies to critically and creatively analyze media messages, practices, infrastructures, and institutions. Study and produce media such as digital videos, films, and digital games while learning how these communication technologies change our relationships, working environments, and the interconnected world. And participate in rewarding internships that allow students to put this knowledge and new skills to good use.

Interpersonal, Organizational, and Rhetorical Communication

Study theories about human communication processes and problems within interpersonal relationships, organizations, groups and teams, and public and political interactions. Understand how communication influences close relationships, families, co-workers, and employees, and develop important argumentation and conflict management skills for personal and public environments.

Public Relations

Study communication theories and methods that help establish and maintain mutually beneficial relationships with employees, consumers, stockholders, media, and other target audiences. Students will create news releases, digital and print public relations tools, and other forms of organizational communication, and discover best practices for social media and other new technologies. Students will also develop strategic public relations campaigns for non-profit and for-profit organizations, as well as intern for local businesses, non-profit organizations, public relations firms, or government agencies.

Honors Program

The Communication Honors program allows exceptional undergraduate Communication majors the opportunity to take challenging graduate-level coursework in the Department of Communication. The Communication Department Honors Program requires the completion of three academically challenging courses during a student’s senior year. At least one of the three courses must be at the 500-level (graduate course). Other courses may include a 400-level class taken with an honors option (initiated by the student or faculty) or an Independent Study (COM 499) with an Honors option. These three courses will all count toward the 39 hour BA degree in Communication. Students who satisfy all of the requirements of the Honors Program will have this accomplishment noted on their transcript and be recognized at the departmental graduation ceremony.

In most cases, application to the Departmental Honors Program is submitted during the junior year. All eligible students will be notified and are encouraged to apply. The following criteria must be met by the time the candidate begins honors coursework:

- completion of the departmental core courses
- completion of COM 110 Public Speaking or COM 112 Interpersonal Communication
- completion of an additional 9 hours of Communication courses, including a 300- or 400-level course that involves considerable writing and/or discussion of communication theory
• completion of at least 75 hours of university coursework (at least 24 at NCSU)
• an overall GPA of at least 3.50
• a major GPA of at least 3.50

To apply for admission to the Honors Program, students must submit a copy of their transcript, a letter of intent that discusses their academic goals and interest in the honors program, and a letter of recommendation from either the professor who taught the 300/400 level course mentioned in (3) above or a tenured / tenure-line faculty member who is familiar with the individual’s academic potential.

For more information, contact the Communication Honors Program Director, Dr. Dan DeJoy, ddejoy@ncsu.edu.

Please Note: Students who are eligible for the Honors Program may also be eligible for the Accelerated Bachelor’s/Master’s (ABM) Degree in Communication. Students interested in the ABM must complete the standard application for admission to the Graduate School. Students who complete the honors program in conjunction with the ABM must take three 500-level courses to complete the Honors Program.

Curriculum Notes

Students must enroll in COM 230 Introduction to Communication Theory during their first semester as a Communication major. Admission to the Department of Communication is based upon academic record. Courses in progress at the time of the application deadline will not be considered.

Intra-campus Transfer

Students who wish to change to another major in Humanities and Social Sciences or to add a second major in Humanities and Social Sciences will be eligible to submit an electronic application through CODA (https://go.ncsu.edu/coda) once they have completed at least 12 letter-graded hours and have a GPA of at least 2.0. Candidates who meet the preferred requirements outlined below have a higher probability of being accepted for transfer. All admission is competitive and based on space ability in the specific program. Meeting the preferred requirements does not guarantee admission to the desired major.

Preference is given to applicants with a TGPA of 3.0 or higher or to those who have completed ENG 101 with a “B-” or better and COM 200 plus 3 additional hours in COM and a COM GPA of at least 2.5. No applications are accepted from students whose TGPA is below 2.0.

No final grades below “C-” are permitted for courses used to satisfy Departmental graduation requirements. No grades in COM courses below “C-” may be used to satisfy any University graduation requirements.

Internships

COM 496 Communication Internship, the Department of Communication internship course, is open to all eligible Communication majors and is required for students in the Public Relations concentration. COM 496 is a 3-credit course and requires a minimum commitment of 120 hours at the internship site per semester. The course also requires weekly attendance in the COM 496 Internship class. Because the internship offers a unique opportunity for exceptional students, several criteria must be met in order to be eligible for the internship program. Students must be a senior in Communication, students must have completed a minimum of four (4) Communication courses at the 300/400 level, and students must have earned a minimum GPA of 3.0 in the four Communication courses at the 300/400 level. If students in the Public Relations concentration do not qualify for COM 496, then they cannot graduate in the Public Relations concentration. To obtain additional information concerning COM 496, the student should schedule a conference with the Internship Director, Mr. Dean Phillips, deanworks@nc.rr.com.

Students who have the opportunity to participate in an internship experience outside the Triangle area or who are not eligible for COM 496 may be able to earn one (1) credit through enrolling in COM 296 Communication Internship: Non-Local. Interested students should schedule a conference with the Internship Director, Mr. Dean Phillips, at deanworks@nc.rr.com.

Graduate Programs

The Department of Communication offers a Masters Degree in Communication. In conjunction with the Department of English, the Department of Communication also offers an interdisciplinary Ph.D. program in Communication, Rhetoric, and Digital Media. For more information, please visit the Graduate School website (http://www.ncsu.edu/grad).

Department of English

The Department of English offers introductory and advanced courses in writing, language, literature, and film. The first-year course required of all undergraduate students develops skills in expository writing and in analytical reading. Advanced courses in writing available to all students cover a variety of areas, including journalism, technical and business writing, and creative writing. These courses give students opportunities to pursue special personal and career interests, as do courses in literature, linguistics, rhetoric, and film.

The department offers a Bachelor of Arts major in English with five options:

1. Creative Writing
2. Film Studies
3. Language, Writing, and Rhetoric
4. Literature
5. Teacher Education

Career Opportunities

A degree in English provides both liberal education and practical knowledge about the role of writing and language in the everyday world. It leads to careers in such fields as teaching, journalism, advertising, public relations, personnel management, technical writing, business writing, and creative writing. It sharpens the analytical and interpretive skills needed for professional and managerial careers, and it serves as an excellent preparation for students planning to study law or medicine and for those intending to do graduate work in literature, linguistics, film, or rhetoric.

English Honors Program

The Honors Program in English provides courses that challenge and inspire English majors to pursue their scholarly interests at an advanced level. Honors students enjoy courses in small, seminar settings, engage in independent study, develop expertise in a variety of research practices, and earn recognition for excellent work beyond ordinary requirements.
For admission, students must have a minimum GPA of 3.25 and must have completed at least three English courses above the freshman level with a minimum GPA of 3.25.

**Internship Program**

Internships provide the opportunity for on-the-job experience in writing, editing, graphics, and publication under expert supervision in professional settings.

**Study Abroad**

English majors have the opportunity to study abroad in many foreign cities, including London, Oxford, and Prague. For more information, please visit the Study Abroad website (http://studyabroad.ncsu.edu).

**Student Organizations**

**English Club** The English Club is a student-run organization that is open to all NC State students who have an interest in English.

**Sigma Tau Delta** The NCSU Chapter of Sigma Tau Delta, Alpha Pi Theta, recognizes high scholastic achievement and offers opportunities for leadership and service.

**Bachelor of Arts in English**

**Core Curriculum** The undergraduate major in English is built around an 18-hour core that includes one course from each of the following six categories: American Literature, British Literature, World Literature, Film, Linguistics, and Rhetoric. In addition to the 18-hour core, students take 21 hours of course work in one of the five following concentrations.

Specific curriculum requirements are available on the Registration and Records website (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php).

**Creative Writing**

The concentration in creative writing (CRW) offers a background in literature and language with an emphasis on writing fiction, poetry, screenplays, and / or non-fiction. The 21-hour Creative Writing concentration includes four creative writing courses, two literature courses, and one English elective. Creative Writing graduates often go on to graduate school for an advanced degree in creative writing, such as the M.F.A. They also often pursue careers in writing, teaching, editing, business, and other fields.

**Film**

The concentration in film (FLM) trains students in the history, analysis, and interpretation of film. The 21-hour FLM concentration includes four film courses and three English electives. Through coursework in film studies, students acquire skills in interpretation, analysis, and criticism; situate films within historical periods; consider the relation of film to literary texts; and study important film genres, directors, and national traditions. They may also become involved in the creative work of screenwriting.

**Language, Writing and Rhetoric**

The concentration in Language, Writing, and Rhetoric (LWR) emphasizes the study of written English in its theoretical, cultural, and practical applications. The 21-hour concentration includes one course in effective communication, one course in digital technology, three Language, Writing and Rhetoric electives, and two English electives. This curriculum can lead to a broad range of professions, with a special focus on careers that involve creating, designing, and producing documents: the news media, business and technical communication, the writing and publishing professions. Students may also focus their studies upon rhetoric, composition, and linguistics and prepare for graduate study in these areas or for law school, teaching, and other professions.

**Literature**

The Literature (LLT) concentration provides a strong general education with an emphasis on the study of literature through interdisciplinary approaches. Attentive to the roles played by new media, diversity, and globalization, this concentration is also informed by the emerging field of digital humanities. It leads to a broad range of careers in education, business, government, law, etc. The major includes 39 hours of English courses beyond freshman composition, seven courses that satisfy categorical requirements, and two literature electives.

**Teacher Education**

Students in the Teacher Education program (TED) take 31 hours of professional coursework in addition to the 18-hour core curriculum in English and the 21-hour TED concentration. The concentration includes five literature courses and two English electives. Admission to the program requires the joint permission of the Department of English and the College of Education. Formal applications are required for admission to Teacher Education candidacy and for admission to the Professional Semester. Students who complete the program are eligible to apply for certification to teach English in secondary schools in North Carolina.

**Minor in English**

The Department of English offers a minor in English to majors in any field except English. This flexible minor allows students to pursue general interests in writing, literature, and language.

**Minor in American Literature**

The Department of English offers a minor in American Literature to NC State students, except for English LLT majors. The minor consists of five courses focusing on the English language literature of the United States and of the British colonies out of which the United States emerged.

**Minor in Creative Writing**

A minor in Creative Writing is available from the Department of English for NC State students, except for English CRW majors.

**Minor in Film Studies**

The film minor provides a comprehensive introduction to the art and industry of the cinema through courses in film analysis, history, theory, criticism, screen writing, and production. The minor is open to all students except for English FLM majors or majors in Arts Studies-Film.

**Minor in Journalism**

The Department of English and the Department of Communication offer a minor in Journalism to NC State students, except English LWR majors. The minor provides course work in writing and editing news and features for print and non-media as well as an introduction to the profession of journalism.
Minor in Linguistics

The linguistics minor, available to all students except for English LWR majors, is designed to investigate the structure and function of language as a cognitive and behavioral science. Five courses in designated areas of linguistics are required in the minor. Among students likely to be attracted to this minor are those who expect to pursue graduate study in linguistics, those interested in foreign languages or English as a second language, and those interested in communication sciences.

Minor in Technical and Scientific Communication

A minor in Technical and Scientific Communication is available from the Department of English for NC State students, except English LWR majors, who are interested in supplementing their studies in technical, scientific, or other academic fields with strong writing and communication skills. Students minoring in Technical and Scientific Communication will be introduced to numerous genres including internal and external documents such as proposals, reports, science writing, users guides, reference manuals, and online documentation. Critical perspectives towards the role of communication in the creation of scientific and technical knowledge will be examined. The minor may lead to career opportunities in technical and scientific writing and communication.

Minor in World Literature

In keeping with the university’s mission to provide an international curriculum, the World Literature minor offers NC State students, except for English LLT majors, an opportunity to broaden their perspectives on foreign cultures through the study of literature outside the Anglo-American tradition. Students will also develop critical, analytical, and linguistic skills essential in today’s job market. The minor offers choices from a range of courses in literature, in translation or in the original language, from Europe, Asia, Africa, and Latin America.

Graduate Programs

At the graduate level, the Department of English offers three graduate degrees: a Master of Arts in English, a Master of Science in Technical Communication, and a Master of Fine Arts in Creative Writing. In conjunction with the Department of Communication, the Department of English also offers an interdisciplinary Ph.D. program in Communication, Rhetoric, and Digital Media. For more information, please visit the Graduate School website (http://www.ncsu.edu/grad). A five-course certificate program in Professional Writing, available to students not seeking a degree at NC State, offers preparation in practical writing and editing, including both journalism and technical writing.

Department of Foreign Language and Literatures

Opportunities

The expansion of international relations makes the knowledge of foreign languages a critical need for today’s professional. The student of foreign languages is not limited to teaching, translating or interpreting. There are careers in politics, diplomacy, commerce, business, agriculture, science, and research in which a thorough knowledge of foreign languages and cultures is crucial for success. The demand for multilingual personnel extends to all fields of human enterprise and will continue to grow in the coming years.

Bachelor of Arts in Foreign Languages and Literatures (concentrations in Arabic Language and Culture, Asian Language, French, German Studies, or Spanish)

All the general requirements for Bachelor of Arts degree must be met. Degree designations are B.A. in Foreign Languages and Literatures. Major concentrations in Arabic Language and Culture, Asian Language, French Language and Literatures, German Studies, Spanish Language and Literatures, and Foreign Language Education with a French, German, or Spanish option.

Outstanding students may become members of the Pi Delta Phi, French Honor Society, Sigma Delta Pi, National Hispanic Honor Society, or of Delta Phi Alpha, German Honor Society.

Major in Foreign Language Education with French, German, or Spanish Teaching Option

In collaboration with the College of Education and the Department of Curriculum and Instruction, the Department of Foreign Languages and Literatures offers a program leading to a French, German, or Spanish teaching license in North Carolina, grades K-12.

Programs Abroad

Summer study programs are offered in Austria, France, Italy, Spain, and Peru.

Minors in Foreign Language, Literatures, and Cultures

Minor programs in the Department of Foreign Languages and Literatures include courses in language, literature, and civilization. The minor program requires 15 hours of study in Arabic, Chinese Studies, Classical Studies, French, German, Hindi-Urdu, Italian Studies, Japanese, Japan Studies, Persian, Portuguese, Russian Studies, or Spanish.

Undergraduate students majoring in any area of study at NC State are eligible to minor in a foreign language. Students may not, however, major and minor in the same language.

English as a Second Language (ESL)

The English as a Second Language program serves the academic and professional language needs of international university students. Courses are designed to help both undergraduate and graduate students perfect their language skills. The ESL program administers the Speaking Proficiency English Assessment Kit (SPEAK) for potential graduate teaching assistants to measure their oral English proficiency.

ESL Add-On Licensure for K-12 teachers

The ESL program provides an ESL teacher licensure program for undergraduates enrolled in teacher education and for currently licensed North Carolina public school teachers.

TESOL Certificate Program

This non-degree hybrid program which includes a 30-hour internship is designed for those who are interested in teaching English abroad and in community colleges, and working and volunteering in immigrant communities. Students earn a TESOL Certificate in one semester.
Summer Institute in English

The Summer Institute in English offers intensive, communicative instruction and practice to students, business people, and professionals pursuing more advanced proficiency in English.

Department of History

Withers Hall, Room 350  
Phone: (919) 515-2483  
Visit the Department of History’s website (http://history.ncsu.edu/)

The Department of History offers three undergraduate majors, a minor, an M.A. in History, an M.A. in Public History and a Ph. D. in Public History (see Graduate Catalog for advanced degrees). The departmental Honors Program provides a guided experience in undergraduate independent research and awards departmental Honors in History upon graduation. Outstanding history students are eligible for membership in Phi Alpha Theta, the professional honors society for historians.

In an ever-changing world, understanding our history becomes all the more necessary. It brings us a sense of the complexity and contingency of events. It provides us with rich and diverse perspectives. It informs us about the prevalence of unintended consequences. The Department of History at NC State brings alive the treasure of human experience and cultures, from the ancient near East to the post-Cold War world, from medieval life to modern science and technology, from the ancient Americas to the modern United States.

The History Department is a diverse group of scholars covering many areas of specialization. Faculty members have a strong record of publications, grant and fellowship awards, and public outreach. We pride ourselves on outstanding teaching, and we offer small classes that allow a great deal of individual attention. Our faculty advisors offer close contact and personal attention to each student. The History major is a place to get a “small college” education in a big state university.

The department of twenty-eight professors has about two hundred undergraduate majors. To all our majors, we offer small classes, and special fifteen-person seminars as both an introduction to historical methods and as a senior capstone experience. The programs offer a great deal of student choice in courses and electives, allowing the pursuit of either a broad educational experience or a focused study. A student could follow a particular interest in clusters of electives, such as history of race relations, law and society, or the history of science and technology.

History teaches that understanding a situation requires identifying with people who lived in other times and places. History is a discipline whose very method seeks and applies fair and appropriate norms to understand and judge human behavior. Students will learn to exercise independent judgment as well as to tolerate differences.

Opportunities

There are many reasons to major in History. Students learn how to gather the relevant facts and develop the most persuasive explanation. The critical skills learned by history majors can be used in a variety of careers. The major is an excellent preparation for the study of law. Employers tell us they want people with a deeper awareness of the changing world, combined with the ability to read, analyze, and write about its causes and outcomes. Our graduates are lawyers, business-owners, museum directors, doctors, archivists, politicians, consultants, judges, farmers, chefs, military officers, and of course teachers and professors of history. Whether or not they became historians, they use their training in historical thinking as they ask and explain why two communities or peoples failed to co-exist, a merger failed, a disease spread, an idea or faith took hold, or a relationship worked.

Honors Program

The departmental Honors Program invites a small number of highly qualified and motivated students to pursue intensive individually directed work in history. Students are invited to enter the Honors Program (usually in the junior year). Students must take 9 hours of individual, directed study with a faculty mentor, producing an Honors Thesis of original research. These research and writing courses replace some of the advanced electives in the degree programs.

Majors in History

Bachelor of Arts in History

The degree requires 30 hours of history course work (in addition to the 6 hours required of all College of Humanities & Social Sciences majors). Required courses include the Sophomore Seminar in History (HI 300) and the capstone Seminar in History (HI 491). Breadth distribution requirements at the introductory level include a course in world history, history of Asia or Africa or Latin America, European history, and American history. At least 12 of the 30 hours must be Advanced Electives at the 400-level.

This degree allows 32 hours of free electives for a total of 122 hours.

Specific curriculum requirements are available on the Registration and Records website (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php), under the Humanities & Social Sciences drop-down list.

Bachelor of Arts in History with a Teacher Education Concentration

The Teacher Education Concentration is a track to a B.A. in History that includes the specific history and social science courses recommended for eventual Social Studies teachers in North Carolina. Students take the full array of undergraduate requirements, but also can use free electives to begin graduate Education classes. In collaboration with the College of Education, students with a 3.5 GPA may count some of the credits from their senior year for the Master of Arts in Teaching (M.A.T.) This accelerated program is intended to be a five-year track to the M.A.T. degree. The M.A.T. is supervised and granted by the College of Education. Professional education courses, and the student teaching experience in a high school, are part of the graduate portion of the program, leading to eligibility for North Carolina certification to teach Social Studies in secondary schools in North Carolina and most other states. Holders of the M.A.T. more competitive in the teacher job market.

The degree requires 30 hours of history course work (in addition to the 6 hours required of all College of Humanities & Social Sciences majors). Required courses include the Sophomore Seminar in History (HI 300) and the capstone Seminar in History (HI 491). Breadth distribution requirements at the introductory level include both world history surveys, history of Asia or Africa or Latin America, European history, and both American history surveys. The degree requires 21 hours of social science courses.

Specific curriculum requirements are available on the Registration and Records website (https://www.acs.ncsu.edu/php/coursecat/
Bachelor of Science in History

The importance of science and technology in our society makes a background in science and technology valuable even for humanities majors. The B.S. degree offers a way for students to get both the analytical and writing skills that come from a history major and the technical proficiency that comes with coursework in science and engineering. This combination is very helpful in a wide variety of careers, including law, business, and public policy. This degree is particularly well suited for students transferring into history from a science or engineering major, or double-majoring with a science or engineering discipline.

The degree requires 24 hours of history course work (in addition to the 6 hours required of all College of Humanities & Social Science majors). Required courses include the Sophomore Seminar in History (HI 300) and the capstone Seminar in History (HI 491), and at least 4 other courses at the Advanced 400-level. Students work with their faculty advisor to design a 15-hour concentration in a single area of science and technology. This degree allows students to integrate a broad base in science and math with a history education.

Specific curriculum requirements are available on the Registration and Records website (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php), under the Humanities & Social Sciences drop-down list.

Minor in History

The minor requires 18 hours of history, made up of two 200-level history courses (one in recent American or European history and one in pre-modern history or in Asian, African, or Latin American history), and four courses at the 300- or 400-level (at least two of which must be at the 400-level).

Interdisciplinary Studies

Home to six major or major concentrations of study and nine minors, Interdisciplinary Studies offers students boundary-crossing curricula of study that provide the skills and tools to think critically about our increasing dynamic society. Drawing on faculty from throughout the College and the University, these diverse courses of study make our students innovative and uniquely prepared to address the grand challenges our nation and our world face today. Interdisciplinary Studies offers myriad major courses of study, allowing our students to engage with world cultures, garner skills in flexible thinking, and prepare to engage the professional world as informed citizens. Students are exposed to complex and diverse perspectives, building the skills and tools necessary for a successful professional career or graduate study.

Program Directors and contact information are listed within each Interdisciplinary Studies undergraduate program, which can be accessed below:

- Africana Studies
- Arts Studies: Film, Music, or Visual Arts (major and minor)
- Film Studies (minor)
- International Studies 8 concentrations (major and minor)
- Middle East Studies (minor)
- Native American Studies (minor)
- Nonprofit Studies (minor)
- Science, Technology and Society
- Women’s and Gender Studies

For more information, please see the CHASS Interdisciplinary Studies website. (link: http://ids.chass.ncsu.edu)

Africana Studies Program

Bachelor of Arts in Africana Studies

The Africana Studies curriculum is designed to explore the cross-cultural, international, and multidisciplinary perspectives of the African diaspora. By studying the black experiences throughout the world, students will develop an African-centered lens to examine how the intersections of race, ethnicity, gender, and class affect the human experience. The core courses aim to develop students’ ability to tackle global issues in an ever-changing world.

For more information see the Africana Studies website (https://ids.chass.ncsu.edu/studies/africana.php).

Minor in Africana Studies

The minor in Africana Studies is designed to bring together students from diverse backgrounds who share an interest in the global experience of African people. Three required courses include African Civilizations AFS 240), an Introduction to African-American Studies (AFS 241), and Introduction to the African Diaspora (AFS 342). Two elective courses may be selected from a list of designated courses in such disciplines as Anthropology, English, History, Music, Political Science, Psychology, Sociology, and Social Work. Study Abroad (e.g., Africa, Caribbean) and service learning opportunities are also available.

Arts Studies Program

Bachelor of Arts in Arts Studies

The Arts Studies curriculum offers four areas of specialization that focus on the history, interpretation, and production of the visual and performing arts in aesthetic and cultural context. Students pursue the academic study of film, music, theater, or visual art. The core courses, in conjunction with a concentration, aim to help students identify key concepts, study literature and issues in a foundational area, formulate research questions for multidisciplinary projects.

For more information visit the Arts Studies website (https://ids.chass.ncsu.edu/studies/arts.php)

Minor in Arts Studies

The minor in Arts Studies is designed to enrich the student’s university experience, to serve as a foundation for learning and understanding the arts beyond the university years, and to stimulate intellectual development in ways that may reinforce or complement the objectives of the student’s major. This minor provides the student with a fundamental understanding of the historical, theoretical, and practical disciplines of the arts.
Film Studies Program

Minor in Film Studies

The Departments of English, Communication, and Foreign Languages & Literatures offer a Minor in Film Studies. The Minor provides an introduction to the film medium, some background in cinema history, and the opportunity for in-depth study of selected topics in genres, directors, and film styles.

For more information on the film program at NC State visit the Film Studies website (http://www.ncsu.edu/chass/film).

International Studies Program

Bachelor of Arts in International Studies

The International Studies curriculum is designed to educate students within a global context. The program of study requires students to integrate theoretical knowledge about broad global processes and methods used to study them with in-depth examination of a particular world region or major theme in international studies. The curriculum is designed to expose students to a variety of disciplinary approaches. It prepares students to pursue advanced studies in diverse academic fields, and for careers in global corporations, international organizations, and in the government or non-profit sectors.

For more information, see the International Studies Program website. (https://ids.chass.ncsu.edu/studies/internationalstudies.php)

Minor in International Studies

The International Studies minor is offered to all students in the university who want to add a significant international dimension to their departmental majors. This minor program enables students to explore international topics, issues and research from cross-cultural, transnational perspectives. The program will provide some tools that students can use to understand better the global context of the modern world and to learn the international dimensions of their chosen fields of study.

Nonprofit Studies Program

Minor in Nonprofit Studies

The interdisciplinary minor in Nonprofit Studies is designed to prepare undergraduate students for careers in the nonprofit sector, in both paid and volunteer positions. This curriculum provides students with an understanding of the role of the nonprofit sector in society and builds students’ knowledge, skills, and abilities in effective nonprofit leadership. Through multiple service-learning experiences and a nonprofit internship requirement, students are offered a variety of hands-on experiences designed to facilitate an understanding of the issues and challenges faced by nonprofit organizations and prepare students for nonprofit leadership positions. The minor in Nonprofit Studies enables students to explore the interconnections between their chosen field and the nonprofit sector.

For more information: nonprofitminor@ncsu.edu, http://nonprofit.chass.ncsu.edu/education/minor.php.

Science, Technology, and Society Program

Bachelor of Arts and Bachelor of Science in Science, Technology, and Society

The Science, Technology, and Society (STS) curriculum seeks to explore the myriad of ways in which science and technology shape our society. The only program of its kind in North Carolina, the core courses of STS aim to understand the connections between science, technology, economics and commerce, domestic policy and international relations, the environment, health and medicine, and other crucial areas inform basic questions of equity, justice, and sustainability. With these connections in mind, STS students examine how science and technology emerge, how they engage with society, how they change through social processes, and how society changes under their influence.

For more information, visit the STS Program website (http://ids.chass.ncsu.edu/sts).

Minor in Science, Technology, and Society

The minor in Science, Technology, and Society is a fifteen-hour, interdisciplinary minor providing students an opportunity to appreciate and better understand the roles that science and technology play in the larger sociocultural context. The goal of the minor in Science, Technology, and Society is to enable students to increase the breadth of their interests in science and technology.

Honors in Science, Technology, and Society

The Honors Program in STS offers an enriching and challenging educational experience to qualified majors. Admission to the program requires at least a 3.25 overall GPA and 3.25 major GPA, including STS 214 Introduction to Science, Technology, and Society and at least 6 other hours of course work in the major requirements. Honors students must complete the Honors Option in STS 403 Seminar in Science, technology, and Society with a course grade of B+ or better; three hours of course work in the major requirements taken from among graduate courses and independent study courses; and three additional hours of course work in the major requirements taken from among honors courses, honors option courses, graduate courses, and independent study courses. Graduation requires a 3.25 GPA overall and a 3.40 GPA in the major. Successful completion of the program is noted on the student’s transcript and in the commencement and honors convocation programs.

Women's and Gender Studies Program

Bachelor of Arts in Women’s and Gender Studies

The Women’s and Gender Studies curriculum is designed to lead students to analyze and reinterpret existing data and common assumptions about gender and gender identity from a multidisciplinary perspective. This approach foregrounds the complex relationships between gender, class, ethnic and racial structures; acquaints students with the often unacknowledged contributions made by women in the humanities and sciences, and grounds students in feminist theories and methodological perspectives. The aim of this program it to recognize the
substantial contributions of feminist theories to social and public policy analysis.

For more information, please visit the Women’s and Gender Studies website. (http://ids.chass.ncsu.edu/studies/womensgender.php)

**Minor in Women’s and Gender Studies**

Like the major, the 15 hour Women’s and Gender Studies minor offers students across the university the opportunity for a rigorous focus on women’s and gender issues, feminist theories, and interdisciplinary perspectives on the intersectional relationships of gender, race, class, and ethnicity. Students will be prepared to consider some questions of gender in both the academy and workforce, after completing this minor.

**Department of Philosophy and Religious Studies**

The disciplines of Philosophy and Religious Studies tackle important questions with rigorous standards, relying on over two millennia of accumulated wisdom.

Philosophy seeks to advance our understanding of ourselves and the nature of reality, mind, knowledge and morality. It is concerned with fundamental questions and critically investigates what other disciplines and other human activities take for granted. Philosophy students at NC State study the writings of great philosophers and recent work on topics such as the relationship between mind and brain, the demands of morality, the justification of political and legal institutions, the relationship between knowledge and reality, and the nature of the logic that structures human language and thought.

Religious Studies does not seek to advance the practice of religion or any particular religion, but to understand religion as a complex and significant human phenomenon. Students majoring in Religious Studies at NC State study the history, texts and practices of both well-known and lesser-known religious traditions as well as a range of theoretical and comparative issues concerning religion, such as the meaning of ritual, the role of gender, the impact of religion in the modern world, and the relationship between religion and conflict.

Both Philosophy and Religious Studies help students to develop their capacity to think critically, constructively and independently, to analyze and solve problems, and to elaborate their ideas and present them in a clear, cogent and well-organized way.

**Opportunities**

The NC State major in Philosophy provides excellent preparation for top graduate programs in Philosophy as well as for professional training in fields as diverse as law, library science, management and medicine. Although the major does not train students for a particular career, it develops skills that are useful for work in any field that requires critical, constructive and independent thinking.

The NC State major in Religious Studies provides excellent preparation for top graduate programs in Religious Studies as well as for professional training in fields as diverse as education, library science, ministry and social work. The major also provides knowledge and skills that are useful for work in many fields, including diplomacy, educating the public, fund-raising, journalism, museum projects and public service.

Students majoring in Philosophy or Religious Studies tend to achieve higher scores on objective tests such as the GRE (required for admission to graduate schools), the LSAT (required for admission to law schools) and the GMAT (required for admission to MBA programs). The majors in Philosophy and Religious Studies are both designed to combine easily with a major in a further discipline that is relevant to a student’s career aspirations. Students who take advantage of this opportunity will enhance their chance of future success.

**Philosophy Honors Program**

The honors program in Philosophy offers an enriched and challenging educational experience to qualified majors. Admission to the program requires completion of nine credits in the major, a 3.66 GPA in the major, and a 3.25 GPA overall. To graduate with Honors in Philosophy, a student must complete a degree in philosophy and in doing so complete the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOG/MA 335</td>
<td>Symbolic Logic</td>
<td>3</td>
</tr>
<tr>
<td>PHI 300</td>
<td>Ancient Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHI 301</td>
<td>Early Modern Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHI 498</td>
<td>Special Topics in Philosophy (taken for the honors thesis, to be evaluated by an honors committee)</td>
<td>3</td>
</tr>
</tbody>
</table>

At least one other course in the history of philosophy: 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHI 302</td>
<td>19th Century Philosophy</td>
</tr>
<tr>
<td>PHI 310</td>
<td>Existentialism</td>
</tr>
<tr>
<td>PHI 376</td>
<td>History of Ethics</td>
</tr>
<tr>
<td>PHI 401</td>
<td>Kant’s Critique of Pure Reason</td>
</tr>
</tbody>
</table>

Complete one 3 credit, 400-level PHI course other than PHI 498 3

Total Units 18

Graduation requires a 3.66 GPA in the major and a 3.25 GPA overall. Successful completion of the program is noted on the student’s transcript and in the commencement and honors convocation programs.

**Religious Studies Honors Program**

The honors program in Religious Studies guides outstanding majors in independent, critical inquiry of the academic study of religion. Admission to the program requires junior standing, completion of nine hours in the major, and a 3.25 GPA overall and in the major. Honors students must complete at least nine credit hours of honors option course work in Religious Studies (including at least one 400 level course) and write an honors paper as part of an independent study course (REL 498 Special Topics in Religious Studies) which is evaluated by an honors committee.

Graduation requires a 3.25 GPA overall and in the major. Successful completion of the program is noted on the student’s transcript and in the commencement and honors convocation programs.

**Bachelor of Arts in Religious Studies**

The major in Religious Studies consists of 30 credit hours. The courses must include:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>REL 200</td>
<td>Introduction to the Study of Religion</td>
<td>3</td>
</tr>
<tr>
<td>One of the following Non-Western Religious Tradition courses:</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>REL 230</td>
<td>Asian Religions</td>
<td></td>
</tr>
<tr>
<td>REL 331</td>
<td>The Hindu Tradition</td>
<td></td>
</tr>
<tr>
<td>REL 332</td>
<td>The Buddhist Traditions</td>
<td></td>
</tr>
<tr>
<td>REL 333</td>
<td>Chinese Religions</td>
<td></td>
</tr>
</tbody>
</table>
### Bachelor of Arts in Philosophy

Candidates for the Bachelor of Arts in Philosophy must complete 30 hours in philosophy, including the three hours in philosophy required for all College of Humanities and Social Sciences students.

Two of the following courses in development of Western philosophical thought:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHI 300</td>
<td>Ancient Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHI 301</td>
<td>Early Modern Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHI 302</td>
<td>19th Century Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHI 401</td>
<td>Kant's Critique of Pure Reason</td>
<td>3</td>
</tr>
</tbody>
</table>

One of the following logic courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOG 201</td>
<td>Logic</td>
<td>3</td>
</tr>
<tr>
<td>LOG/MA 335</td>
<td>Symbolic Logic</td>
<td>3</td>
</tr>
<tr>
<td>LOG 435</td>
<td>Advanced Logic &amp; Metamathematics</td>
<td>3</td>
</tr>
<tr>
<td>LOG 437</td>
<td>Model Theoretic Semantics</td>
<td>3</td>
</tr>
</tbody>
</table>

One of the following value theory courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHI 309</td>
<td>Political Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHI 313</td>
<td>Ethical Problems in the Law</td>
<td>3</td>
</tr>
<tr>
<td>PHI/STS 325</td>
<td>Bio-Medical Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PHI 375</td>
<td>Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PHI 376</td>
<td>History of Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PHI 420</td>
<td>Global Justice</td>
<td>3</td>
</tr>
<tr>
<td>PHI 475</td>
<td>Ethical Theory</td>
<td>3</td>
</tr>
</tbody>
</table>

One of the following contemporary philosophy courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHI 330</td>
<td>Metaphysics</td>
<td>3</td>
</tr>
<tr>
<td>PHI 331</td>
<td>Philosophy of Language</td>
<td>3</td>
</tr>
<tr>
<td>PHI 332</td>
<td>Philosophy of Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PHI 333</td>
<td>Knowledge and Skepticism</td>
<td>3</td>
</tr>
<tr>
<td>PHI 425</td>
<td>Introduction to Cognitive Science</td>
<td>3</td>
</tr>
<tr>
<td>PHI 440</td>
<td>The Scientific Method</td>
<td>3</td>
</tr>
<tr>
<td>PHI 447</td>
<td>Philosophy, Evolution and Human Nature</td>
<td>3</td>
</tr>
</tbody>
</table>

All three of the following one-credit courses in research writing

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHI 205</td>
<td>Research and Writing in Ethics</td>
<td>1</td>
</tr>
<tr>
<td>PHI 210</td>
<td>Research and Writing in History of Philosophy</td>
<td>1</td>
</tr>
<tr>
<td>PHI 496</td>
<td>Research and Writing in Contemporary Philosophy</td>
<td>1</td>
</tr>
</tbody>
</table>

Four additional LOG or PHI courses (Note that PHI 205 and PHI 210 may not both be used toward this requirement).

At least one of the courses taken to satisfy these requirements must be a three-credit-hour, 400-level PHI or LOG course (other than PHI/LOG 498).

Total Units: 30

### Major in Philosophy with a Concentration in Ethics

The concentration requires 30 hours in philosophy, including the three hours in philosophy required of all College of Humanities and Social Sciences students.

Two of the following courses in development of Western philosophical thought:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHI 330</td>
<td>Metaphysics</td>
<td>3</td>
</tr>
<tr>
<td>PHI 331</td>
<td>Philosophy of Language</td>
<td>3</td>
</tr>
<tr>
<td>PHI 332</td>
<td>Philosophy of Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PHI 333</td>
<td>Knowledge and Skepticism</td>
<td>3</td>
</tr>
<tr>
<td>PHI 425</td>
<td>Introduction to Cognitive Science</td>
<td>3</td>
</tr>
<tr>
<td>PHI 440</td>
<td>The Scientific Method</td>
<td>3</td>
</tr>
<tr>
<td>PHI 447</td>
<td>Philosophy, Evolution and Human Nature</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Units: 30
NC State University

PHI 300   Ancient Philosophy
PHI 301   Early Modern Philosophy
PHI 302   19th Century Philosophy
PHI 401   Kant's Critique of Pure Reason

One of the following logic courses: 3
LOG 201   Logic
LOG/MA 335  Symbolic Logic
LOG 435   Advanced Logic & Metamathematics
LOG 437   Model Theoretic Semantics

Two of the following core courses: 6
PHI 375   Ethics
PHI 376   History of Ethics
PHI 475   Ethical Theory

Two additional ethics courses: 6
PHI 221   Contemporary Moral Issues
PHI 309   Political Philosophy
PHI 313   Ethical Problems in the Law
PHI/STS 325  Bio-Medical Ethics
PHI 375   Ethics (if not taken as a core course)
PHI 376   History of Ethics (if not taken as a core course)
PHI 420   Global Justice
PHI 475   Ethical Theory (if not taken as a core course)

One of the following contemporary philosophy courses: 3
PHI 330   Metaphysics
PHI 331   Philosophy of Language
PHI 332   Philosophy of Psychology
PHI 333   Knowledge and Skepticism
PHI/PSY 425  Introduction to Cognitive Science
PHI 440   The Scientific Method
PHI 447   Philosophy, Evolution and Human Nature

All three of the following one-credit courses in research and writing: 3
PHI 494   Research and Writing in Ethics
PHI 495   Research and Writing in History of Philosophy
PHI 496   Research and Writing in Contemporary Philosophy

One additional LOG or PHI course 3

At least one of the courses taken to satisfy these requirements must be a three-credit-hour, 400-level PHI or LOG course (other than PHI/LOG 498).

Total Units 30

Bachelor of Science in Philosophy

Candidates for the Bachelor of Science in Philosophy must complete 30 hours in philosophy, including the three hours in philosophy required for all College of Humanities and Social Sciences students.

Two of the of the following courses in development of Western philosophical thought: 6
PHI 300   Ancient Philosophy
PHI 301   Early Modern Philosophy
PHI 302   19th Century Philosophy
PHI 401   Kant's Critique of Pure Reason

One of the following logic courses: 3
LOG 201   Logic
LOG/MA 335  Symbolic Logic
LOG 435   Advanced Logic & Metamathematics
LOG 437   Model Theoretic Semantics

One of the following value theory courses: 3
PHI 309   Political Philosophy
PHI 313   Ethical Problems in the Law
PHI/STS 325  Bio-Medical Ethics
PHI 375   Ethics
PHI 376   History of Ethics
PHI 420   Global Justice

Total Units 30

Major in Philosophy with a Concentration in Philosophy of Law

The concentration requires 30 hours, including the three hours of philosophy required of all College of Humanities and Social Sciences students.

PHI 309   Political Philosophy
PHI 312   Philosophy of Law
PHI 313   Ethical Problems in the Law

One of the following value theory courses: 3
PHI 375   Ethics
PHI 376   History of Ethics
PHI 475   Ethical Theory

One of the following courses in development of Western philosophical thought: 3
PHI 300   Ancient Philosophy
PHI 301   Early Modern Philosophy
PHI 302   19th Century Philosophy
PHI 401   Kant's Critique of Pure Reason

One of the following logic or practical reasoning courses: 3
LOG 201   Logic
LOG/MA 335  Symbolic Logic
LOG 435   Advanced Logic & Metamathematics
LOG 437   Model Theoretic Semantics

One of the following contemporary philosophy courses: 3
PHI 330   Metaphysics
PHI 331   Philosophy of Language
PHI 332   Philosophy of Psychology
PHI 333   Knowledge and Skepticism
PHI/PSY 425  Introduction to Cognitive Science
PHI 440   The Scientific Method
PHI 447   Philosophy, Evolution and Human Nature

All three of the following one-credit courses in research and writing: 3
PHI 494   Research and Writing in Ethics
PHI 495   Research and Writing in History of Philosophy
PHI 496   Research and Writing in Contemporary Philosophy

Two advised electives 6

At least one of the courses taken to satisfy these requirements must be a three-credit-hour, 400-level PHI or LOG course (other than PHI/LOG 498).

Total Units 30
PHI 475  Ethical Theory
One of the following contemporary philosophy courses:  3
PHI 330  Metaphysics
PHI 331  Philosophy of Language
PHI 332  Philosophy of Psychology
PHI 333  Knowledge and Skepticism
PHI/PSY 425  Introduction to Cognitive Science
PHI 440  The Scientific Method
PHI 447  Philosophy, Evolution and Human Nature
One of the following courses in philosophy of science:  3
PHI 340  Philosophy of Science
PHI 440  The Scientific Method
PHI 447  Philosophy, Evolution and Human Nature
All three of the following one-credit courses in research and writing:  3
PHI 494  Research and Writing in Ethics
PHI 495  Research and Writing in History of Philosophy
PHI 496  Research and Writing in Contemporary Philosophy
Three additional LOG or PHI courses (note that PHI 205 and PHI 210 may not both be used toward this requirement)
At least one of the courses taken to satisfy these requirements must be a three-credit-hour, 400-level PHI or LOG course (other than PHI/LOG 498).

Total Units  30

Major in Philosophy with a Concentration in Logic, Representation and Reasoning

The concentration requires 30 hours, not including the three hours of philosophy required of all College of Humanities and Social Sciences students.

Two three-credit courses in development of Western philosophical thought:  6
PHI 300  Political Philosophy
and one of the following:
PHI 301  Ancient Philosophy
PHI 302  19th Century Philosophy
PHI 401  Kant’s Critique of Pure Reason
One of the following value theory courses:  3
PHI 309  Ethical Theory
PHI 375  Ethics
PHI 376  History of Ethics
PHI 420  Global Justice
PHI 475  Ethical Theory
The following logic course:  3
LOG/MA 335  Symbolic Logic
Two of the following courses in logic, philosophy of language and cognition, at least one of which must be a PHI course:  6
LOG 435  Advanced Logic & Metamathematics
LOG 437  Model Theoretic Semantics
PHI 331  Philosophy of Language
PHI 332  Philosophy of Psychology
PHI/PSY 425  Introduction to Cognitive Science

One of the following courses in the philosophy of science:  3
PHI 340  Philosophy of Science
PHI 440  The Scientific Method
PHI 447  Philosophy, Evolution and Human Nature
Two of the following additional courses in logic, philosophy of language and cognition:  6
LOG 201  Logic
LOG/MA 335  Symbolic Logic
LOG 435  Advanced Logic & Metamathematics
LOG 437  Model Theoretic Semantics
PHI 330  Metaphysics
PHI 331  Philosophy of Language
PHI 332  Philosophy of Psychology
PHI 333  Knowledge and Skepticism
PHI/PSY 425  Introduction to Cognitive Science
PHI 440  The Scientific Method
PHI 447  Philosophy, Evolution and Human Nature
Both of the following one-credit courses in research and writing:  2
PHI 496  Research and Writing in Contemporary Philosophy
PHI 497  Research and Writing in Logic, Representation and Reasoning
One of the following one-credit courses in research and writing:  1
PHI 494  Research and Writing in Ethics
PHI 495  Research and Writing in History of Philosophy
Either PHI 205 or PHI 210 but not both may be taken as the three hours of philosophy required of all Humanities & Social Sciences students.

Total Units  30

Minor in Philosophy

Students who take a Minor in Philosophy are required to complete with a grade of C– or better 15 hours of courses in selected fields in philosophy, including a course in the history of philosophy (3 credit hours), a course in normative (ethics and ethics-related) philosophy (3 credit hours), a course other than one in normative philosophy, but not including logic or the history of philosophy (3 credit hours). Please see the Department for course requirements.

Minor in Religious Studies

Students who take a Minor in Religious Studies are required to complete with a grade of C– or better fifteen hours of courses in selected fields of religious studies. In order to ensure a wide study of the field, students are required to select at least one course in each of the following categories: (A) Historical Methods, (B) Textual Methods, and (C) Critical/Theoretical Methods; and also complete (D) 6 elective hours in REL courses. As part of these requirements, it is expected that at least one of these classes focus on Western religious traditions and at least one on non-Western religious traditions. Please see the Department for course requirements.

Minor in Cognitive Science

Students who take a Minor in Cognitive Science must complete 15 hours of courses with a grade of C– or better, where at least three of the five participating disciplines are represented: Psychology, Neurobiology,
Computer Science, Linguistics, and Philosophy (including Logic). Please see the Department for course requirements.

**Minor in Logic and Methodology**

Students who take a Minor in Logic and Methodology are required to complete with a grade of C– or better 15 hours of courses (with an overall average of 2.0 in these courses). Please see the Department for course requirements.

**Minor in Ethics**

Students who take a Minor in Ethics are required to complete with a grade of C– or better 15 hours of courses. Please see the Department for course requirements.

**Minor in Health, Medicine, and Human Values**

Students who take a Minor in Health, Medicine, and Human Values are required to complete with a grade of C– or better 15 hours of courses (with an overall average of 2.0 in these courses). Please see the Department for course requirements.

**Department of Psychology**

**Psychology**

Psychology is one of the basic majors in liberal arts and sciences. Psychologists use the methodology of science to study human behavior and experience. A bachelor's degree in psychology forms an excellent foundation for careers in psychology, as well as business and government. It will also enhance life skills such as parenting and human social interaction. Students can also use this degree as an entry into further education leading to an advanced degree in applied or experimental psychology, or to such fields as law, medicine, business or social work.

**Curriculum in Psychology**

A Psychology degree is oriented toward the student who wants a broad understanding of the types of problems with which psychology is concerned and the ways in which psychologists approach and attempt to solve these problems. Curriculum requirements are sufficiently flexible for students to concentrate, if they wish, in another area of study as well as psychology, and thereby prepare themselves for a variety of careers or professional programs. By wise choice of elective courses, a student can prepare for medical, legal, business, or education graduate training, while at the same time acquire a basic background in the social sciences.

Specific curriculum requirements are available on the Course Catalog (https://www.acs.ncsu.edu/php/coursecat/directory.php).

**Psychology Club**

All undergraduate majors are members of the Psychology Club, which provides a number of enrichment activities. There is also an active chapter of Psi Chi, the national psychology honor society, which provides enrichment to the program.

**Minor in Psychology**

The Department of Psychology offers a minor in psychology to majors in any field except psychology. To complete the minor, eighteen hours of courses are required. PSY 200 Introduction to Psychology is a required prerequisite and the student must have passed this course with a grade of B- or better. PSY 230 is also a required course. To be eligible for the psychology minor, students must have passed BIO 105 Biology in the Modern World/BIO 106 Biology in the Modern World Laboratory with a grade of “C” (not C-) or better. The student must also have an overall GPA of 2.5.

Specific requirements for a minor in Psychology are available on the Course Catalog (https://www.acs.ncsu.edu/php/coursecat/directory.php).

**Minor in Cognitive Science**

The Departments of Psychology and Philosophy and Religion offer an interdisciplinary minor in cognitive science. The minor provides a general introduction to contemporary interdisciplinary research within the framework of the “computer model” mind, and offers the student the opportunity for in-depth study of selected topics of such as the nature of human information processing, and the acquisition and use of machine intelligence.

Students who take a Minor in Cognitive Science must complete 15 hours of courses with a grade of C or better, where at least three of the five participating disciplines are represented: Psychology, Neurobiology, Computer Science, Linguistics, and Philosophy (including Logic). Please see the Department for course requirements.

Specific requirements for a minor in Cognitive Science are available on the Course Catalog (https://www.acs.ncsu.edu/php/coursecat/directory.php).

**School of Public and International Affairs**

The Department of Political Science, part of the School for Public and International Affairs, offers basic and advanced courses in all major fields of the discipline: American government and politics (local, state, and national), public law and criminal justice, public administration, comparative politics, international relations and global issues, political theory, and methodology of political science. The department affords opportunities for the study of government and administration to students in other curricula and schools.

Graduate courses in public administration and international studies are available to advanced undergraduates. See the listing of graduate degree programs and consult the Graduate Catalog.

The department provides academic credit for internships with political parties and campaigns, lobbyists, non-profits, and all levels of government, including the North Carolina General Assembly Legislative Internship Program. Majors in political science with distinguished academic achievements are annually invited to join the Zeta Epsilon Chapter of Pi Sigma Alpha, the national political science honor society.

**Opportunities**

A degree in political science is excellent preparation for a number of careers and graduate opportunities. Political science majors study critical issues surrounding such things as international security, public policy, and government practices. They develop real-world skills such as solving problems logically and systematically, working with others in vertically and horizontally organized arrangements, expressing a position and
defending it with corroborating evidence, and writing clear and correct prose. They also develop citizenship and leadership competencies that include the personal obligation to participate in public life. Consequently, political science majors are well-positioned for careers in teaching, the legal profession, criminal justice agencies, state and local government, urban planning, the federal bureaucracy, journalism or in any of the organizations that seek to monitor political processes or to influence the content of public policy. Private firms also seek managers and public affairs specialists who have a knowledge of the functioning of the political system and of politics in general.

For more information, see the Political Science website. (http://spia.ncsu.edu)

Honors Program

The honors program includes nine credit hours of specialized coursework designed to challenge academically talented majors and allow them to realize their greatest potential as political science students. Required for admission to the program: 3.25 GPA both overall and in the major, completion of 9 hours of PS coursework, and completion of PS 371 Research Methodology of Political Science. Majors admitted to the program complete a substantial research project in consultation with a faculty honors adviser (6 credit hours). Also required: either one 500 level PS course or an honors option 400 level political science course (3 credit hours). Successful completion of the program is noted on the student’s transcript, and at commencement.

Curricula

Bachelor of Arts in Political Science

Major requirements are: 19 hours of core courses that cover major political science sub fields (i.e., American government, international relations, theory, public law and policy, and research methods) as well as courses that develop computer competencies and an orientation to the discipline; 15 hours of political science electives, 12 of which must be taken at the 300 level or above, and one of which must be a 400 level senior seminar, which includes a substantial research requirement. Grades of C- or better are required for courses applied towards the major. At graduation, a minimum GPA of 2.0 is required for all political science courses taken. For a semester-by-semester guide to the course requirements for the Bachelor of Arts curriculum, see the departmental website (http://spia.ncsu.edu/ps/undergraduate.html).

Students who wish to focus their studies in a specific sub field may elect one of the following concentrations under the Bachelor of Arts program:

American Politics

This concentration develops skills that benefit students interested in graduate and professional school, administrative careers, and business careers that involve government relations and policy. Major requirements are: 21 hours of core courses; 9 hours of courses specifically related to the study of political processes, institutions, political culture, and political events within the American system.

International Politics

This concentration develops skills that benefit students interested in graduate or professional school, careers in government service, international organizations, issue advocacy, and businesses with international interests. Major requirements are: 15 hours of core courses; 12 hours of concentration electives in regional and world politics; 3 hours of concentration electives in any political science sub-field.

Law and Justice

This concentration develops skills that benefit students interested in graduate or professional school (particularly law school), law enforcement, judicial administration, and careers with agencies involved in the administration of justice. Major requirements are: 18 hours of core courses; 12 hours of emphasis electives in either the justice system or law and theory.

Public Policy

This concentration prepares students for careers with public institutions where they will work with the processes, formulation, implementation, and evaluation of public policy at international, national, state, and local levels. Major requirements are: 15 hours of core courses; 15 hours of concentration electives.

Bachelor of Science in Political Science

Major requirements are 27 hours of political science coursework. At least 6 hours must be taken from each of the following groups: Group A-American politics/or public policy and administration; Group B- international affairs/comparative politics; and Group C- political theory/scientific methods. At least 18 hours of coursework must be at the 300 level or higher. At least 6 hours of coursework must be at the 400 or 500 level, including one course that is designated as a senior seminar. Grades of C- or better for courses applied towards the major with a minimum GPA of 2.0 for all political science requirements for the Bachelor of Science curriculum, see the Political Science website (http://spia.ncsu.edu/ps/undergraduate.html).

Specific curriculum requirements are available on the Registration and Records website (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php).

Minor in Political Science

Minor requirements are 15 hours of political science coursework with grades of C- or better in each course and a cumulative GPA of 2.0 for all political science courses. A minimum of 12 hours must be taken at the 300 level or above, including one 400 level senior seminar. Coursework must cover at least two of the following three groups:

1. American politics/or public policy and administration
2. International affairs/comparative politics
3. Political theory/scientific methods

Minor in Law and Justice

Minor requirements are 15 hours of political science coursework with grades of C- or better in each course and a cumulative GPA of 2.0 for all political science courses. These 15 hours must include: PS 205 Law and Justice; 12 hours of elective courses, at least one of which must be a 400 level seminar or a 500 level graduate course in political science. This minor program is designed for students who have a special interest in the areas of public law, criminal justice and political theory.

Department of Social Work

The Department of Social Work offers a Bachelor of Social Work (BSW) degree, which was reaccredited by the Council on Social Work Education (CSWE) in 2013. The CSWE Commission on Accreditation is the sole
As one of the nation’s first accredited BSW programs, the Department of Social Work has been training BSW students for more than 30 years to help them prepare for the next step in their social work careers. Students complete a curriculum based on the liberal arts that incorporates a professional foundation, including social work practice, human behavior and diversity, community social services, social policy and research methodology for Social Workers. Optional courses offer opportunities to study in depth various social work practice areas such as child welfare, aging, health care, addiction recovery, African American families, school social work, homeless individuals, soldiers/veterans/families, legal aspects of social work and a 7-week study abroad program in Guatemala. Students complete three 40-hour pre-professional placements and a 420-hour field placement in a social service setting. Upon degree completion, students are eligible for state licensing or certification.

The Department also offers an undergraduate minor in social work and a Master of Social Work (MSW). The social work minor is an excellent choice for students interested in combining a primary academic area (major), such as sociology, political science, psychology, nonprofit studies, or Spanish or other language. The minor must be completed no later than the semester in which the student expects to graduate from their degree program.

The Department offers two MSW program options; an Advanced Standing MSW and a Traditional MSW. The Advanced Standing MSW option is a 12-month intensive, full-time program totaling 39 credit hours that begins in the summer. The Traditional MSW program is a two-year, full-time program requiring the completion of 60 credit hours. This program begins in the fall. For more information please visit the Department of Social Work website.

Our mission is to prepare students for practice that addresses the social, economic, cultural, demographic and political changes that shape our world and beyond. Through teaching, advising, practice and research, we emphasize: Professional ethics, Social justice, Diversity, and Community Engagement.

Our BSW Program has a proven track record as one of the nation’s first accredited programs. We’ve been training BSW students for more than 30 years to help them prepare for the next step in their social work careers. Our curriculum incorporates a professional foundation that includes: Social Work Practice, Human Behavior and Diversity, Community Social Services, Social Policy, Research Methodology for Social Workers. The program also prepares students for advanced graduate-level academic work.

For more information about our BSW program curriculum, please visit The Department of Social Work's BSW Curriculum Page (https://socialwork.chass.ncsu.edu/bsw/curriculum.php).

**Residency Requirements**

A minimum of 34 credit hours, including three practice courses, field preparation and fieldwork, must be completed at NC State’s Department of Social Work BSW Program.

A grade of C- or better is required in all major courses, with the exception of SW 480.

**Opportunities**

Social work is an exciting, challenging, and dynamic profession. No matter what the political climate or the changing nature of personal or social need, social workers will be in demand. The BSW Program provides students with the knowledgeable, values, and skills to respond competently to:

1. The aspirations and service needs of diverse client populations
2. The contexts that shape the needs of clients and service delivery systems throughout the state.

Social workers are employed in a variety of settings which include health care, mental health, services to the aging, child welfare, public welfare, addictions recovery, public schools, developmental disabilities, and many other public and private settings. In each of these areas there is recognition for professional preparation, and the BSW graduate will be prepared to embark upon a career in his or her chosen field. All states, including North Carolina, have licensing or certification procedures for social work practice.

**Minor in Social Work**

The social work minor is designed to familiarize students with the social service system, major social welfare programs, and elements of the profession of social work. This is an excellent minor for students interested in combining a primary academic area (major), such as sociology, political science, or psychology with social welfare and professional social work content. It is also an excellent field of study for students majoring in any area who may need or desire knowledge of social welfare and social justice. No courses for the minor may be taken for S/U credit. A grade of C- or better must be earned in all minor courses.

For more information on the social work minor, please visit the Office of Undergraduate Courses and Curricula and Academic Standards' Social Work Minor Page (https://oucc.dasa.ncsu.edu/social-work-16swm).

**Student Organizations**

Baccalaureate Student Social Work Association (BSSWA) (https://getinvolved.ncsu.edu/organization/92)

BackTrackers (https://getinvolved.ncsu.edu/organization/BackTrackers)

Collegiate Recovery Community (CRC) at NC State (https://getinvolved.ncsu.edu/organization/CRCNCState)

Graduate Student Social Work Association (GSSWA) (https://getinvolved.ncsu.edu/organization/gsswa)

Men in Social Work (MiSW) (https://getinvolved.ncsu.edu/organization/429)

Phi Alpha Honor Society - Epsilon Kappa (https://getinvolved.ncsu.edu/organization/519)

**Department of Sociology and Anthropology**

The Department of Sociology and Anthropology offers introductory and advanced courses in anthropology and sociology. The curricula aim to provide majors with an academic background and practical experiences
useful for careers in government, business and nonprofit organizations, or for pursuing advanced academic work.

Undergraduate majors may earn one of four degrees: Bachelor of Arts in General Anthropology, Bachelor of Arts in Criminology, Bachelor of Arts in Sociology, and Bachelor of Science in Sociology (See the Graduate Catalog (https://grad.ncsu.edu/programs) for information on graduate degrees offered by the department).

### Honors Program

In this program, outstanding majors pursue an individual program of study involving close working relationships with departmental faculty. Twelve credit hours of honors courses and an honors thesis will allow students to enhance their expertise in sociology, criminology, and anthropology. Honors courses combine nine hours of credit in regular classes, each with additional honors work, with a three-credit honors thesis done as an independent study in consultation with a faculty honors adviser.

To be admitted, students must have earned 12 hours in their major and have a 3.25 overall GPA and a 3.25 in the major. To graduate with Anthropology/Criminology/Sociology Honors, the student must have a 3.25 GPA overall and in the major. Successful completion of the program is noted on the student’s transcript and at commencement.

### Bachelor of Arts in Anthropology

The Anthropology major introduces students to anthropology with offerings in three of the subfields of the discipline: archaeology, biological anthropology, and cultural anthropology. Our program focuses on the interrelationships among the cultural, social and biological bases of human behavior in evolutionary and contemporary contexts. The degree emphasizes exposure to different cultures through classic ethnography, and a better understanding of the past through archaeology and human skeletal analysis. Theory and methods are required. An anthropology internship is also offered.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT 251</td>
<td>Physical Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>ANT 252</td>
<td>Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>ANT 253</td>
<td>Unearthing the Past: Introduction to World Archaeology</td>
<td>3</td>
</tr>
<tr>
<td>or ANT 254</td>
<td>Language and Culture</td>
<td></td>
</tr>
<tr>
<td>ANT 411</td>
<td>Overview of Anthropological Theory</td>
<td>3</td>
</tr>
<tr>
<td>or ANT 483</td>
<td>Theories of Archaeological Research</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Research Methods</td>
<td></td>
</tr>
<tr>
<td>ANT 416</td>
<td>Research Methods in Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>or ANT 389</td>
<td>Fundamentals of Archaeological Research</td>
<td></td>
</tr>
<tr>
<td>1 300-level ANT course</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>1 400-level ANT Course</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>ANT General Electives (3 courses at the 300 or 400 level)</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

Specific curriculum requirements are available on the Registration and Records website (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php).

### Bachelor of Arts in Criminology

The Criminology degree provides a foundation for understanding the causes, correction and prevention of crime and the agencies involved in criminal justice. More specific areas of study concern deviance, juvenile delinquency, the court system, and correctional facilities. Students complete a 120 hour internship with a criminal justice field agency during their senior year.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 202</td>
<td>Principles of Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 300</td>
<td>Social Research Methods</td>
<td>4</td>
</tr>
<tr>
<td>SOC 400</td>
<td>Theories of Social Structure</td>
<td>3</td>
</tr>
<tr>
<td>or SOC 401</td>
<td>Theories of Social Interaction</td>
<td></td>
</tr>
<tr>
<td>2 sociology courses at the 300 level or higher</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>3 criminology electives at the 400 level or higher</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>1 criminology-related Political Science course</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>1 additional Sociology elective at any level</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SOC 413</td>
<td>Criminal Justice Field Work</td>
<td>4</td>
</tr>
<tr>
<td>ST 311</td>
<td>Introduction to Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

Specific curriculum requirements are available on the Registration and Records website (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php).

### Minor in Anthropology

A minor in Anthropology focuses on the comparative study of human beings, with an emphasis on both biology and behavior. A flexible selection of courses (15 credit hours) includes offerings from anthropological sub-disciplines such as cultural anthropology, physical anthropology, archaeology, and linguistics.

Specific curriculum requirements are available on the Registration and Records website (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php).

### Minor in Criminology

The criminology minor emphasizes criminological theory and research. The minor is grounded in sociological theory and methods and allows students flexibility in the choice of specialized criminological study such as juvenile delinquency, sociology of law, formal institutions of social control, community and crime, and data analysis in criminology.
Specific curriculum requirements are available on the Registration and Records website (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php).

**Minor in Sociology**

This minor emphasizes sociological theory and research with substantive applications. The minor builds on theory and methodology and allows students flexibility in the choice of specialized sociological study such as social inequality, race and ethnic relations, gender, family, education, work, the environment, food, and community.

Specific curriculum requirements are available on the Registration and Records website (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php).

**Poole College of Management**

2150 Nelson Hall
Box 8614
Raleigh, NC 27695-8614
Phone: (919) 515-5565
fax: (919) 515-5564
E-mail: poole_undergrad@ncsu.edu

Please visit the Poole College of Management's website (https://poole.ncsu.edu/undergraduate) for additional information about our programs.

The Poole College of Management’s curricula provide students with the knowledge and skills required to launch successful careers in today’s dynamic global business community. Poole graduates are prepared to pursue positions with large corporations, small firms, and start-ups, nonprofits, government agencies, or even to start their own businesses. Many choose to pursue advanced studies in professional accounting, economics, law and business administration either upon graduation or after acquiring a few years of professional experience.

The college’s academic programs provide a wide range of options that enable students to build on their existing interests and strengths, as well as to explore new directions. Students may study accounting, information technology, financial management, supply chain management, marketing, economic analysis, human resource management, entrepreneurship, and more. Communication skills, data analysis skills, and computer literacy are integrated into the curriculum, along with project-based, hands-on learning that provides valuable real-world experience.

Students acquire a strong liberal arts background through general education courses and electives that they choose from the many options available through NC State’s historically strong academic programs in science, technology, engineering, humanities and social science. Dual degree and interdisciplinary programs are also available, and students are encouraged to participate in study abroad, internships, and campus leadership opportunities during their time in the college.

NC State University is accredited by AACSB International—the Association to Advance Collegiate Schools of Business. Accreditation brings the Poole College of Management into the select ranks of the best business and management schools in the world.

Poole College of Management faculty bring years of professional experience along with solid academic training into our classrooms. Many are active in corporate consulting and serve on the boards of directors of major corporations. A large number of the college’s faculty are members of NC State University’s Academy of Outstanding Teachers, and many others have been honored for their teaching, research, and service. The faculty is organized into four academic departments:

- Accounting
- Business Management
- Economics
- Management, Innovation, and Entrepreneurship

**Degree Programs**

The Poole College of Management offers the following undergraduate degree programs:

- B.S. in Accounting
- B.S. in Business Administration
- B.A. in Economics
- B.S. in Economics

New freshmen enter the college as “Management First Year” students; during their second semester, students declare the degree program they choose to pursue. Transfer students matriculate directly into their chosen degree program.

The **Accounting** program provides a general business foundation with a depth of specialization in accounting issues and skills. Students develop interpersonal, teamwork and problem-solving skills, and learn how to apply technology in the accounting field. The curriculum includes financial and managerial accounting, taxation, business law and ethics, auditing and accounting information systems. Five concentrations are offered: financial analysis, information systems, managerial accounting, internal auditing, and government/nonprofit accounting. Outstanding students completing the Bachelor of Science in Accounting program may choose to apply directly to the Master of Accounting (MAC) program, earning the graduate degree with just one additional year of coursework. Successful completion of the graduate program qualifies students to sit for the Certified Public Accounting (CPA) exam.

The **Business Administration** curriculum focuses on integrating knowledge of all the core business functions through a strategic management lens, coupled with depth of expertise in one concentration area of specialization. All students take foundation courses in finance, marketing, human resource management, entrepreneurship, business law, supply chain/operations management, information systems and strategic management, and select a concentration area of focus from one of the following: entrepreneurship, finance, human resource management, information technology, marketing, and operations/supply chain management. The curriculum emphasizes computer skills and the application of information technology, teamwork, problem-solving and ethical and critical thinking for decision making in a global strategic context.

The **Economics** program provides a broad education in the liberal arts with a specialization in economic theory and application. Students can select the Bachelor of Arts in Economics degree, which provides more liberal arts courses, or the Bachelor of Science in Economics, with a greater focus on business, mathematics, statistics, and science. The economics programs are flexible, and with thoughtful advance planning, students can easily pursue an economics degree along with a minor or even a second major in another academic area.

For those interested in advanced studies, the college also offers graduate degrees: Master of Accounting, Master of Economics, Master of Business
Administration, Master of Global Innovation Management, Master of Global Luxury Management and Doctorate in Economics.

**Dual Degree International Programs**

The Poole College of Management is committed to offering a variety of international opportunities for our students. From specialized Poole-sponsored summer international programs to semester and full-year study abroad programs, to unique dual-degree options, Poole students are offered a world of choice in international study.

Hamilton Scholars (http://poole.ncsu.edu/undergraduate/global/alexander-hamilton-scholars) is a dual degree program offered collaboratively by the Poole College of Management and the College of Humanities and Social Sciences (CHASS). In four years, students can complete two degrees: one from the Poole College of Management in either Accounting, Business Administration or Economics and the second from CHASS in International Studies. The Hamilton Scholars program includes extracurricular activities and requires at least one study abroad experience. Graduates of the program are prepared to function successfully in cross-cultural corporate settings.

The International Business Dual Degree (IBDD) Program provides an even richer opportunity for international immersion and study. In this program, students spend their first two years studying at NC State University, then the next two years studying at one of our partner universities in China, France, Germany, Italy or Spain. Students complete two internships: one in each country. In addition, students take most of the courses at the partner University in the native language. Upon completion of the four-year program, students earn a Bachelor of Science in Business Administration from NC State University and a bachelor’s degree in International Business/Management from the partner institution. Graduates of the IBDD Program are bi-lingual; have at least 9 months work experience; have lived, studied, and worked in two countries and are highly sought after for international positions, both domestic and abroad.

For more information on Poole international dual degree programs, visit the Poole College of Management’s website (https://poole.ncsu.edu/undergraduate).

**Academic Minors**

Students enrolled in other majors at NC State may choose to minor in accounting, business administration, or economics. Visit the "Academics - Minors" page on the Poole College of Management’s website (https://poole.ncsu.edu/undergraduate) for additional information.

**Curriculum and Degree Requirements**

The Poole College of Management requires that Accounting and Business Management majors earn at least 30 credit hours while officially enrolled as a degree candidate in either the Accounting or Business Management curriculum. Students in the Economics majors (B.A. and B.S.) must earn at least 1/2 of their required economic credits while enrolled in the Economics curriculum. Students must be admitted to the degree program at the beginning of the semester to qualify as being enrolled as a degree candidate during the semester.

**Student Organizations**

Numerous student organizations are housed in the Poole College to provide undergraduate students a wide range of exposure to business in practice. Students are encouraged to become active in the clubs and organizations aligned with their chosen major and/or concentration in order to develop networking skills and professional contacts. Student organizations are also a valuable source of service and professional development experiences and provide undergraduates a wide range of leadership development opportunities. Visit the Poole College of Management’s website (http://poole.ncsu.edu/undergraduate/academics/minors) for additional information.

**Student Services**

The Poole College of Management is committed to providing the support services to enable our students to succeed. Our team of full-time professional advisors provides comprehensive academic advising services to undergraduate students from freshman through senior year; our international programs staff supports student exploration of appropriate global experiences during their academic career; our career development staff is dedicated to helping students pursue internships during their academic program and career positions upon graduation.

**Scholarships**

Through the generous support of alumni, friends and corporate partners, the Poole College of Management offers a limited number of highly competitive scholarships to our current and incoming students, in addition to any available university-wide awards. Please visit the Poole College of Management’s website (https://poole.ncsu.edu/undergraduate) for additional information and a list of additional resources for possible financial support. Students are encouraged to contact the University’s Office of Scholarships and Financial Aid for more information and assistance in planning the financing of their college costs.

**Admission to the Poole College of Management**

Admission to the Poole College of Management is quite competitive. To learn more about admission requirements and how to apply to the Poole College of Management, see the Poole College admission page (https://poole.ncsu.edu/undergraduate/admissions).

**Department of Accounting**

The accounting program provides education and training to individuals who plan to pursue careers as professional accountants in consulting, business, government, and industry. The Department of Accounting offers Bachelor of Science and Master of Accounting degrees. The Bachelor of Science degree requires the student to specialize in one of five concentrations: information systems, financial analysis, managerial accounting, internal auditing, or government/nonprofit accounting. The Master of Accounting (MAC) degree program produces more specialized accounting professionals and responds to the American Institute of Certified Public Accountants mandated 150-hour education requirement for certification.

The curriculum consists of a general foundation in humanities, social science, science and mathematics; a comprehensive business core; a complete accounting core; and a concentration in a functional accounting area.

**Opportunities**

The field of accounting deals with identifying, measuring and communicating information to assist individuals and companies in making informed economic decisions. Accounting provides students with
excellent career opportunities. Individuals graduating with an accounting degree can expect to be exposed to all aspects of an organization from a broad top-down perspective.

Curriculum and Degree Requirements

All accounting majors are subject to the college's residency requirement: at least 30 credit hours of course work while officially enrolled as a degree candidate in the B.S. degree program in Accounting (or the B.S. in Business Administration). In addition to completing 30 credit hours of their major course requirements for the accounting degree at NC State University, students must take ACC 450 and three of the following four courses at NC State: ACC 310, ACC 311, ACC 330 and ACC 340.

Minor in Accounting

The Accounting Minor is offered to students interested in gaining a basic knowledge of accounting to supplement another degree, or to prepare for a graduate program in Accounting.

For additional information, view the "Academics - Minors" page on the Poole College of Management’s website (https://poole.ncsu.edu/undergraduate).

Department of Business Management & Department of Management, Innovation and Entrepreneurship

Department of Business Management & Department of Management, Innovation and Entrepreneurship

The Bachelor of Science degree in Business Administration is offered jointly by faculty in the Departments of Business Management and Management, Innovation and Entrepreneurship. This degree program prepares students for careers in business, consulting, government, or nonprofit organizations as well as for graduate study in business, law, and related fields. The curriculum focuses on strategic integration of the core business functions. All students study finance, marketing, supply chain, human resource management, entrepreneurship, and information technology before declaring a specific concentration for more in-depth study. Concentration areas are listed below:

- Entrepreneurship
- Finance
- Human Resource Management
- Information Technology
- Marketing
- Operations/Supply Chain Management

Opportunities

Graduates in business administration are prepared for a variety of careers in business or industry including new product development, marketing, manufacturing, human resources, IT management, business analysis, banking and finance, consulting, and business development. They have the knowledge and tools to launch new business ideas and succeed in management positions.

Curriculum and Degree Requirements

All business administration majors are subject to the college's residency requirement: a student must complete at least 30 credit hours of the major course requirements for the degree at NC State University. In addition, a student must complete at least 30 credit hours (not restricted to courses in the major) while officially enrolled as a degree candidate in either the Business Administration or Accounting program.

Minor in Business Administration

The Business Administration minor is offered to students interested in gaining a basic knowledge of business practice to supplement another degree. As an option, students may complete a focus in Entrepreneurship within the Business Administration minor.

Students must apply for admission to the Business Administration minor program. Enrollment in upper-level business courses is restricted to students enrolled in either the degree or minor program. For information and an application visit the "Academics - Minors" page on the Poole College of Management’s website (https://poole.ncsu.edu/undergraduate).

Department of Economics

The Department of Economics offers both Bachelor of Arts and Bachelor of Science degrees in Economics. An undergraduate program in economics prepares a student for careers in business and government as well as for many graduate and professional degree programs.

Economics students can develop their understanding of economic issues in a variety of areas including financial institutions, international trade and finance, labor and industrial relations, health care economics, environmental and natural resource economics, public finance, and economic history.

A degree in economics provides rigorous analytical training with a broad understanding of the workings of the global economic system. Its flexibility allows students to tailor their education to specific interests and career goals.

Opportunities

An undergraduate degree in economics has long served as the foundation for advanced professional degrees in law and business, graduate study in economics, as well as jobs in business, industry and government.

Curricula and Degree Requirements

The Bachelor of Arts in Economics (B.A.) is a broad and flexible program of study. The major course work for the B.A. in Economics includes courses in economic theory, mathematics and statistics as well as courses in advanced, applied economics. The program provides for substantial flexibility, so students may tailor their studies to their particular interests and long-term goals.

The Bachelor of Science in Economics (B.S.) emphasizes training in analytical methods in economics. It differs from the Bachelor of Arts by placing greater emphasis on courses in mathematics, science, and statistics.

All Economics majors are subject to the college's residency requirement: Students in the Economics majors (B.A. or B.S.) must earn at least 1/2
of their required economics (EC) credits while enrolled in the curriculum, and students must complete at least one-half of the required economics credit hours (EC courses) at NC State University.

**Honors Program**

The Honors Program in Economics is designed for academically talented and motivated students who desire a richer educational experience than offered in regular courses. The primary goal of this program is to help students develop the ability to apply economic analysis to a variety of issues at the individual, corporate, and government level.

Class size is kept small in honors sections to accommodate discussion and interaction among students and with the instructor. Students graduating with honors in economics are well prepared for graduate or professional school or for entering the private or public sector job market.

Students enrolled in the University Scholars program, or who have completed 30 hours at NC State with an overall GPA of 3.25 or better, may enroll in economics honors courses.

To be certified as a graduate of the economics honors program, students must have at least a 3.25 major GPA in all economics courses attempted at NC State and an overall GPA of 3.25 or higher. In addition, students must complete specific course requirements.

Questions about the economics honors program should be directed to the Department of Economics faculty.

**Minor in Economics**

The Minor in Economics is available to undergraduate students majoring in an area other than economics. The Minor in Economics is an excellent complement to many majors within the university, including international studies, political science, statistics, business administration, accounting, and engineering.

For additional information, view the "Academics - Minors" page on the Poole College of Management’s website (https://poole.ncsu.edu/undergraduate).

**College of Natural Resources**

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NCSU Box 8001  
Raleigh, NC 27695-8001  
Phone: (919) 515-2883  
Fax: (919) 515-7231  
E-mail: naturalresources@ncsu.edu  
Visit the College of Natural Resources' website (http://www.cnr.ncsu.edu)!

**Mission**

Our mission is to serve as a leader in our disciplines in North Carolina, the nation and the world. We seek to strengthen natural resource management, enhance environmental quality and conservation values, increase the sustainable yield of forestland goods and services, increase the value and competitiveness of the forest products and natural resource-based industries, expand recreation and tourism opportunities, and enhance the health and well being of our citizens through superior professional education, innovative scientific research, and dissemination of credible and timely information.

**Values**

We value—

- Academic excellence in all of its forms — the scholarships of discovery, teaching, information transfer and scientific integration.
- Both cutting-edge research in fundamental science and translational research to address practical problems in North Carolina, the nation and the world.
- Diversity of disciplines, people, places and ideas
- Our students, staff and faculty are committed to nurturing all.

We admire— academic and scientific rigor and dedication

We seek— innovative and creative solutions to today’s problems.

We strive— for collegiality and appreciate friendly service.

We aspire— to leadership in all of our disciplines.

We intend— to make the world a better place for this and future generations.

**Degree Programs**

The College of Natural Resources offers programs of study leading to baccalaureate and graduate degrees in the management and use of natural resources, and also offers courses in these areas to students in other colleges. Ten professional curricula are administered in the college through its Departments of Forestry and Environmental Resources; Parks, Recreation and Tourism Management; and Forest Biomaterials. These programs provide a broad education in the biological, physical, and social sciences as well as a sound cultural and professional background. Baccalaureate degrees prepare students for careers in the fields of fisheries, wildlife, and conservation biology; forest management; natural resources assessment and policy; environmental monitoring, testing and remediation; environmental science; parks, recreation and tourism management; professional golf management; sport management; paper science and engineering; and sustainable materials and technology.

Graduate degrees offered include Master of Science, Master of Forestry, Master of Fisheries, Wildlife, and Conservation Biology. Master of Natural Resources Administration, Master of Forest Biomaterials, Master of Parks, Recreation and Tourism Management, Master of Geospatial Information Science and Technology, Master of Environmental Assessment, and the Doctor of Philosophy. Graduate degree programs may be tailored to a variety of specialized and interdisciplinary topics related to the teaching and research activities of the college. In addition, graduate certificates in Graphical Information Science and in Environmental Assessment are available to NC State students who wish to develop recognized academic credentials in these areas. Applicants
should consult the Graduate Catalog (http://www.ncsu.edu/grad/catalog) for additional information about these programs.

Student Activities

Each department in the college has student curriculum clubs within the degree programs and/or student chapters of the appropriate national professional organizations. All of these organizations provide opportunities for professional development, for interaction with faculty and other students, and for participation in local, regional, and national student and professional activities. Student representatives from each organization and curriculum serve on the College of Natural Resources Council. The Council provides overall coordination for student activities, allocates funds for student activities, and oversees production of the Pinetum, the College of Natural Resources student yearbook.

CNR Ambassadors

The CNR Ambassador Program highlights the “student face” of the college. The group is composed of leaders from each program in the college, following a college-wide nomination and selection process. Their activities include representing the college in many ways, ranging from mentoring freshmen to working with prospective students, through shadowing experiences, phone calls and campus tours. In addition the Ambassadors represent their programs and the college to outside visitors, such as the Board of Trustees, Foundation officers, and others who would like to know about the CNR student experience at NC State.

Facilities and Laboratories

In addition to standard classrooms and teaching laboratories, the College of Natural Resources has a unique complex of indoor and field facilities that are utilized in the academic programs. CNR computer facilities provide access to disciplinary applications such as geographic information systems, remote sensing, process simulation, and management/planning software as well as to the university computer network. Included are a general computer lab, two classrooms incorporating a flexible landscape, plasma screens and laptop computers providing the breadth of teaching/learning approaches, a high-tech “collaboratory” designed especially for student team project work. Also available are several different analytical and biotechnology facilities, an extensive herbarium, and a wood sample collection. About 95,000 acres of forestland are available for field instruction and research at Chowan Swamp, Bull Neck Swamp, Goodwin Forest, Hill Forest, Hofmann Forest, Hosley Forest and Schenck Forest. Slucum Camp, the site of the annual forestry and wildlife camps at Hill Forest, contains classrooms, dining facilities, and student and staff housing. Specialized pilot plant laboratories unique to wood and paper science are contained in the Hodges Wood Products Laboratory and the Reuben B. Robertson Pulp and Paper Laboratory. Equipment in the Hodges Laboratory includes computer controlled woodworking machinery, testing for biomaterials, 3-D printer, life cycle analysis software, and numerous other items required to convert sustainable materials into viable products. The Robertson Laboratory is a 50,000 sq. ft. facility, which contains laboratories and modern pulping and paper making equipment dedicated to teaching and research activities. Examples of equipment are secondary fiber recycling equipment, a thermo-mechanical pulping unit, a pilot-scale paper machine, process control equipment, paper testing laboratory, and pulping digesters.

Fields of Instruction and Work Experience

All curricula in the college have strong components of hands-on field and laboratory instruction and experience, and all either require or strongly recommend on-the-job work experience. All students are required to complete the equivalent of one or more of the following summer activities: camp, internship, practicum, and work experience. The Forest Management and Fisheries, Wildlife, and Conservation Biology curricula both have required summer camps. Undergraduates enrolled in Parks, Recreation and Tourism Management complete a 9-week internship immediately following the completion of the junior year. All Paper Science majors complete a 12 week internship in an industrial setting approved by the college. Sustainable Materials and Technology students are required to complete a summer internship in the industry. Students in all curricula are encouraged to participate in summer jobs and the cooperative education program to gain work experience.

Outdoor and other practical laboratories are a regular part of some courses. In other courses, field instruction may include longer trips (often on weekends) to privately owned businesses and industries, governmental agencies, state and federal forests, and wildlife refuges.

Honors and Scholars Programs

The College of Natural Resources participates in the University Honors Program, the University Scholars Program, the Women in Science and Engineering (WISE) Program, and the Eco-Village Program in which exceptional new students (freshman or transfer) are selected for special courses and activities that provide an expanded educational experience.

The College of Natural Resources also offers a disciplinary honors program, which provides the opportunity for advanced students with outstanding records to enhance the depth of study in their major field. Students with an overall GPA of 3.0 or better and a major GPA of 3.25 or better are invited to participate in the Honors Program. Students must have at least 40 hours of credit. Honors students develop more rigorous programs of study, frequently taking advanced courses in mathematics, science, or social science, or graduate courses in the chosen curriculum. With the adviser’s consent honors students may substitute preferred courses for normally required courses in order to develop strength in special interest areas. Honors students are required to undertake a program of independent study, which can involve a research problem or special project during their junior or senior year, and they must participate in the senior honors seminar.

Two honor societies in the College of Natural Resources promote and recognize academic excellence: Xi Sigma Pi (for majors within Forestry and Environmental Resources and in Forest Biomaterials) and Rho Phi Lambda (for recreation majors). Advanced undergraduate and graduate students with high academic achievement are invited to become members of these societies. High achieving forest management and natural resources students are also eligible for recognition by two agriculture honor societies, Alpha Zeta and Gamma Sigma Delta. All students are also eligible for recognition by the campus-wide honor societies.

Scholarships

The College of Natural Resources administers a large program of academic scholarships that is separate from the University Merit Awards Program. About 150 academic scholarships (ranging from $1,000 to $10,000 per year), renewable annually, are awarded in several program
areas to new, continuing, and transfer students. The scholarships are awarded based on academic excellence and leadership.

**Computer Competency**

Extensive use of computers and workstations is incorporated throughout all curricula of the College of Natural Resources. Students are expected to use the computer for increasingly complex class assignments and for the preparation of papers and reports. Computing resources are available for student use in the college and elsewhere on campus, but many students find it more convenient to purchase a personal computer. Questions about such purchases should be directed to the Associate Dean for Academic Affairs or the appropriate departmental curriculum coordinator.

**International Activities**

Students in the College of Natural Resources are exposed to the international dimensions of their programs in a variety of ways. Many faculty members regularly travel abroad and a number are active in major projects in foreign countries, including an international cooperative research project concentrating on Central American and Mexico, faculty exchange programs with Sweden and Finland, and several recent agreements for student exchange programs in Asia and South America. With the faculty’s experiences, the international aspects of many topics are covered in core courses, and several elective undergraduate and graduate courses focus specifically on the international dimensions of natural resource management. In addition, many international students enroll in the college with as many as 21 different countries represented in recent years. There are also in-the-major study abroad opportunities, which are led by CNR faculty, and which range from two-week trips to five-week summer sessions. Recent study trips have included China, Australia, Namibia, Ghana, Sweden, Costa Rica, and Chile. There is also scholarship support to help students take advantage of international job opportunities.

**Department of Forest Biomaterials**

Sustainable, renewable forest biomaterials such as wood, paper and value-added biomaterials are produced by large and small industries across North Carolina, and throughout the US. These renewable biomaterials are used for construction of sustainable housing, low carbon bioenergy, recyclable pulp and paper products, and value-added chemicals and composites. The future is bright for students with a blend of engineering, materials science, and practical business skills that are highly valued by employers.

The Department of Forest Biomaterials offers two curricula leading to Bachelor of Science degrees - Paper Science and Engineering, and Sustainable Materials and Technology. Both curricula feature small classes, extensive interactions between faculty and students, opportunities for internships, co-ops and undergraduate research, and stress the professional development of all students. Graduates are exceptionally well prepared for rewarding professional careers with large or small companies in the renewable biomaterials industries, suppliers to the industry, or with government agencies.

**Sustainable Materials and Technology**

Perry N. Peralta, Director of Undergraduate Programs

Email:perry_peralta@ncsu.edu

The Sustainable Materials & Technology degree prepares students for 21st century jobs helping businesses and communities reduce their ecological footprint through efficient use of renewable natural materials, such as wood, bamboo and cork, in the manufacture and use of value-added products. You'll gain a strong foundation in environmental science, economics, social sciences, and materials science which prepares you to design, manufacture and sell sustainable bio-based products. This degree is for students interested in a career in a growing field with job flexibility, high placement rates, great starting salaries, a tradition of success and an unlimited future.

Specific curriculum requirements are available online (https://oucc.dasa.ncsu.edu/cnr-15smtbs-nosubplan-2138).

**Summer Internship**

Graduates of the Sustainable Materials and Technology program enter the real world with hands-on experience gained through internships, lab experiments, and practical coursework. More than one half of students participate in paid undergraduate research and work study opportunities. In addition, students are required to complete a paid summer internship or a semester co-op with a company in the industry. There are many other summer employment opportunities that are available to you beyond the required internship.

**Opportunities**

Graduates of the Sustainable Materials and Technology curriculum have many and varied job opportunities upon graduation with most receiving more than one job offer. Graduates enter the industry as management trainees, sales trainees, process engineers, quality assurance specialist, research & development associates and many others.

**Minor in Sustainable Materials & Technology**

The Department of Forest Biomaterials (FB) offers a minor in Sustainable Materials and Technology (SMT) to all undergraduates enrolled in the University as degree candidates except those in FB. The minor will provide students with a basic understanding of sustainability as applied to materials (e.g., wood, agricultural products, etc.) and the manufacturing processes that are used to convert them into a multitude of different products.

**Requirements**

A minimum of 15 hours is required for completion of the minor, and the minor should be completed no later than the semester in which the student expects to graduate from his/her degree program. Three (3) courses are required as indicated below; other courses are elective. An overall GPA of 2.0 in the minor coursework must be achieved.

**Required Courses (8 semester hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMT 201</td>
<td>Sustainable Materials for Green Housing</td>
<td>2</td>
</tr>
<tr>
<td>SMT 310</td>
<td>Introduction to Industrial Ecology</td>
<td>3</td>
</tr>
<tr>
<td>PSE 476</td>
<td>Environmental Life Cycle Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>

**Elective Courses (a minimum of 7 semester hours is required)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMT 232</td>
<td>Recycling to Create a Sustainable Environment</td>
<td>2</td>
</tr>
<tr>
<td>ET 203</td>
<td>Pollution Prevention</td>
<td>1</td>
</tr>
<tr>
<td>ET 303</td>
<td>Laboratory Safety Systems and Management</td>
<td>1</td>
</tr>
<tr>
<td>ET 410</td>
<td>Toxic Substances and Society</td>
<td>3</td>
</tr>
</tbody>
</table>
FOR 248 Forest History, Technology and Society 3
PSE 425 Bioenergy & Biomaterials Engineering 3
PRT 250 Management of Park and Recreation Facilities 3
PRT 451 Principles of Recreation Planning and Facility Development 3

Admission and Certification of Minor
In both instances, students should contact the minor advisor, Dr. Perry Peralta. Paperwork for certification can be found in 1022 Biltmore Hall and should be completed no later than the registration period for the student's final semester at NC State.

Curricula in Paper Science and Engineering
M. V. Byrd, Director of Undergraduate Programs

The Paper Science and Engineering curriculum prepares students for careers in the paper industry, which ranks as the fifth-largest manufacturing industry in the United States. Science, engineering, and mathematics form the basis for a multidisciplinary approach to understanding the fundamental aspects of materials science and engineering of these complex renewable materials. Students study the technology and engineering of wood pulping processes, chemical and energy recovery systems, and pulp bleaching. In addition, various papermaking operations, such as refining, sizing, coating, and drying are studied. These topics, along with the chemical and biological modification of wood, papermaking, and the physics of paper based materials form a fundamental set of core courses that all students in the curriculum take.

Two concentrations are available emphasizing the different engineering aspects of pulping and paper making. The Paper Science and Engineering concentration provides an extensive background in the pulp and paper manufacturing processes and elective credit hours for studies in chemistry, marketing, economics, management or other areas of interest to the student. Greater depth in general chemical engineering principles can be obtained from the Chemical Engineering Concentration. Students who have completed the Chemical Engineering Concentration in Paper Science and Engineering can, in cooperation with the College of Engineering and with an additional semester of study, earn a Bachelor of Science in Chemical Engineering as a second degree.

The curriculum requirements for the degree in Paper Science and Engineering may be found online (https://oucc.dasa.ncsu.edu/cnr-15psebs-nosubplan-2161).

Program Educational Objectives
Within a few years after graduation, alumni of the Paper Science & Engineering Program at NC State University will be:

- Effective engineers and leaders in the paper, chemical process, and related industries.
- Professionals who act in a safe and ethical manner.
- Lifelong learners who pursue opportunities to continue their education.

Opportunities
Graduates of this curriculum find opportunities for challenging careers as process engineers, product development engineers, process control engineers, chemists, technical service engineers, quality control supervisors, and production supervisors. Design and construction engineering companies employ graduates as project engineers, and pulp and paper machinery/chemical companies use their education and skills for technical service and sales positions. Opportunities for managerial and executive positions are available to graduates as they gain experience.

The broad and intensive nature of this curriculum makes graduates attractive not only to the pulp and paper industry, but also to a variety of other major chemical process and bio-energy industries. This appeal is especially true for the dual degree in Paper Science & Engineering and Chemical Engineering.

Summer Internship
All Paper Science and Engineering majors are required to work one summer in a pulp or paper manufacturing facility. One hour of academic credit is granted after completion of 12 weeks of this work and presentation of an engineering report of professional quality. In addition, students are urged to work in manufacturing facilities the other two summers, as the work provides valuable practical experience. Departmental advisers assist students in locating summer jobs, which are found throughout the US and abroad.

Many Paper Science & Engineering students work at least one co-op rotation, in which they leave school for one semester and work in the industry. The resulting experience adds significantly to a student’s desirability upon graduation.

Accredited Program

Regional Program
The Paper Science and Engineering curriculum is a regional program approved by the Southern Regional Education Board as the undergraduate program to serve the Southeast in this field.

Scholarships
Approximately 125 undergraduate academic scholarships worth approximately $300,000 are granted annually to new and continuing students by companies comprising the Pulp and Paper Foundation, and by alumni and supporters of the program.

Minor in Paper Science and Engineering
The Paper Science and Engineering Minor is available to all undergraduate students enrolled in the university as degree candidates except Paper Science and Engineering Majors. The minor requires 15 credit hours. Six hours of required courses provide a comprehensive overview of pulping and paper making science and technology, including pulping, bleaching, chemical recovery, recycled fibers, paper making, coating, printing, converting, and paper properties. Nine elective hours may be chosen from areas including wood chemistry, wet end chemistry, unit operations, process design and analysis, project management, and process control.

The course requirements for the PSE minor may be found online (https://oucc.dasa.ncsu.edu/pulp-and-paper-technology-15ppm).

The Paper Science and Engineering Minor, with its focus on paper making science and technology, is intended to be especially valuable to students majoring in programs leading to careers in corporate or government positions which would interface with the paper and related fields.
industries. Students interested in business, scientific or engineering specialties which may interface with or are employed by these industries will find the minor especially useful.

Admissions and Certification of Minor
All undergraduate students enrolled in the university as a degree candidate, other than PSE majors, are eligible for admission to the PSE minor program. The PSE Minor Adviser will serve as adviser and certify completion of the minor. Paperwork for certification must be submitted to the minor adviser no later than the registration period for the student’s final semester at NC State.

The minor must be completed no later than the semester in which the student expects to graduate from his or her degree program.

Contact Person: Dr. Med Byrd, Minor Adviser, 2205 Biltmore Hall, (919) 515-5790.

Department of Forestry and Environmental Resources
The undergraduate program of the Department of Forestry and Environmental Resources prepares students for professional challenges, personal growth, and a lifetime of service as managers of natural resources. Each curriculum produces well-educated graduates who have the knowledge, skills, flexibility, and attitude needed for successful professional performance. Graduates will be prepared to face the challenges of competing uses of natural resources and the environment, and the pressures for increasing production of goods and services from natural ecosystems while maintaining their quality for future generations.

The Department of Forestry and Environmental Resources strives to enroll and graduate high-quality culturally and ethnically diverse students. Its academic curricula are enriched by out-of-class contacts among students, faculty, and practicing professionals to promote a sense of professionalism and global awareness. Gaining practical experience is encouraged through participation in summer employment, internships, undergraduate research opportunities, study and work abroad, and the cooperative education program.

The department has six Bachelor of Science programs: Forest Management; Natural Resources Ecosystem Assessment; Natural Resources-Policy and Administration; Fisheries, Wildlife, and Conservation Biology; Environmental Technology and Management; and Environmental Sciences. The Forest Management curriculum provides the broad-based forestry education needed for direct employment into positions in a wide variety of forestry or forestry-related organizations. The Natural Resources curricula provide interdisciplinary programs in natural resources management that focus as indicated in the curricula titles. The Fisheries Wildlife and Conservation Biology curriculum provides specialization in ecological principles needed to conserve and manage fisheries and wildlife resources. The Environmental Technology and Management curriculum provides broad-based and applied skills for the assessment and management of society’s impact on the environment. The Environmental Sciences curriculum provides basis for focusing on a wide variety of environmental problems.

All six curricula integrate instruction and practice in communications skills (both writing and speaking). Spatial technologies and computer applications facilitate problem solving throughout technical courses.

Information on department programs may be obtained by contacting Kimber Lunsford, Assistant Director of Undergraduate Programs, Department of Forestry and Environmental Resources, NCSU, Box 8008, Raleigh, NC 27695-8008, Phone (919) 513-2582, E-mail: ktluinsfo@ncsu.edu. Specific curriculum requirements are available at https://oucc.dasa.ncsu.edu/natural-resources-cnr/.

Scholarships
The Department of Forestry and Environmental Resources annually awards four types of scholarships that are available to freshmen, transfers, and advanced students: Academic, Forestry & Wildlife Summer Camp, Industrial, and Work-Study. About 40 Academic Scholarships varying between $4000 and $7000 are awarded annually in May for the following academic year. These are renewable provided that superior progress is made toward a degree. Timber sales from the James L. Goodwin and Hofmann forests and nineteen endowments provide these awards.

Nine scholarships support students attending forestry or wildlife summer camps. Each award provides $500-$1000. Six endowments support these awards.

Three Industrial scholarships are available each year. In addition to cash awards of $2000 - $4000, the Industrial Scholarships provide practical work experience with industrial forestry organizations. Industrial Scholarships are supported by grants.

Approximately 18 Work-Study Scholarships are awarded each year, generally to juniors and seniors. Work-Study Scholarships, currently at $4032 each, carry a work requirement, which is usually satisfied by assisting with operational activities on the college forests. This requirement means that recipients must be advanced students with some field skills.

Scholarship applications or questions should be directed to Dr. Richard Braham, Scholarship Coordinator 3003 Biltmore Hall, Phone: (919) 515-7568, Fax: (919) 515-8149, E-mail: richard_braham@ncsu.edu.

Cooperative Education, Internships, and Summer Work Experience
Practical work experience is an important component of the professional degree programs in the Department of Forestry and Environmental Resources. Experience may be gained through participation in the Cooperative Education Program, summer work, and internships. The department has established professional relationships with employers in forestry, fisheries management, wildlife management, environmental technology management and natural resources, and provides placement assistance for the work experience programs. The Fisheries Wildlife and Conservation Biology Program offers summer internships with research faculty and others across the state. The Cooperative Education Program, which requires a minimum 2.5 GPA after at least one year of study (many employers require a higher minimum GPA), involves alternating semesters or summer periods on the job with semesters on campus for classes. A total of 12 months of work experience is required. Students who successfully complete the co-op program are in high demand by employers.

Dual Degree Programs
Students enrolled in one of the department’s degree programs who have a strong interest in another degree topic may obtain a second baccalaureate degree in addition to the primary one. Such dual degree
programs may be designed to provide a broader base in a related technical field such as wood products or soil science, or to broaden the student’s knowledge and skills in a supporting field such as business, economics, sociology, or political science. Majors in dual degree programs requires coordination of the courses required in both curricula and the additional time required to complete them depends on the similarity between the curricula and the use of electives in one to satisfy required courses in the other. One to several extra semesters may be required to complete two degrees but expanded employment opportunities are a definite benefit.

Transfer Students

The Department of Forestry and Environmental Resources accepts NC State students as on-campus transfers, as well as students with good academic records from other accredited colleges and universities. Students at community colleges or other baccalaureate institutions who plan to transfer to one of the department’s degree programs should closely follow the desired curriculum by taking equivalent courses. Only equivalent courses will be credited to the appropriate degree program after enrolling at NC State, and the time required to complete the degree will depend on the courses remaining in the degree track. Students applying for the Forest Management curriculum must have at least 30 credits equivalent to those in the freshman and sophomore years and must transfer in the fall of the sophomore year in order to complete the courses required for summer camp. Formal articulation agreements exist with the four forestry programs at North Carolina community colleges and those students do not need to attend Summer Camp. Questions about transfer procedures, admissions criteria, or courses should be directed to Kimber Lunsford, Assistant Director of Undergraduate Programs, Department of Forestry and Environmental Resources, NCSU Box 8008, Raleigh, NC 27695-8008, Phone: (919) 513-2582, E-mail: ktlunsfo@ncsu.edu.

Curriculum in Forest Management

The curriculum in Forest Management is a professional program accredited by the Society of American Foresters that has long been ranked as one of the best in the country. The Forest Management curriculum satisfies the education requirements to become registered (licensed) forester by the North Carolina State Board of Registration for Foresters. With a rigorous math and science base, the curriculum produces graduates with a broad education in natural sciences, humanities and social sciences, communications skills, technology and the practical knowledge and skills needed for sound management of the multiple resources of natural and managed forest ecosystems. Preparatory courses in the freshman and sophomore years are followed by the nine-week forestry summer camp where the woods knowledge and field skills that are essential for all foresters are acquired. Core courses of the junior and senior years focus on forest ecosystem processes, applied economics, operational practices in forest stand management, measurement and analysis of forest stand components, policy issues in natural resource management and the management decision-making tools and skills needed to develop and implement forest management plans. For information on entrance requirements, contact Kimber Lunsford at E-mail: ktlunsfo@ncsu.edu.

Forestry Summer Camp

An intensive, full-time, nine-week summer camp with training in the Coastal Plain, Piedmont, and Mountain regions of North Carolina is required in the Forest Management curriculum. The camp is based at the college’s Hill Demonstration Forest located in Durham County, NC with trips taken to other regions. Students take summer camp between the sophomore and junior year and earn nine-semester credits in required courses that provide a base of knowledge and skills for the advanced courses in the junior and senior years.

Opportunities

Graduates in Forest Management are in high demand by state and federal land management agencies, forest products companies growing wood as a raw material, investment firms and insurance companies with land ownership portfolios, state forestry and agriculture extension services, the Peace Corps, environmental and wetland consulting firms, wood procurement companies, nursery and landscape management firms, and environmental organizations. After several years of experience, many graduates start their own businesses in forestry and land management consulting. Some graduates continue their education in graduate school to specialize in a wide variety of forestry and related programs.

Minor in Forest Management

The Forest Management minor is open to all undergraduate degree students at NC State, (except majors in Forest Management), who are interested in learning the basics of the structure and functioning of forest ecosystems and practices of forest management. The minor will be useful to students in related career fields who wish to have a better understanding of the scientific and policy issues involved in the sound stewardship of the nation’s forests. The minor will also be useful to students who may be responsible for management of natural resources or interacting with foresters.

The minor in Forest Management requires a minimum of 15 credit hours, in one of the following options:

Option A

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOR 172</td>
<td>Forest System Mapping and Mensuration I</td>
<td>2</td>
</tr>
<tr>
<td>FOR 339</td>
<td>Dendrology</td>
<td>4</td>
</tr>
<tr>
<td>FOR 252</td>
<td>Introduction to Forest Science</td>
<td>3</td>
</tr>
<tr>
<td>Two FOR Electives</td>
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<td>6</td>
</tr>
<tr>
<td><strong>Total Units</strong></td>
<td></td>
<td>15</td>
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Option B

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOR 172</td>
<td>Forest System Mapping and Mensuration I</td>
<td>2</td>
</tr>
<tr>
<td>FOR 339</td>
<td>Dendrology</td>
<td>4</td>
</tr>
<tr>
<td>Attend Forestry Summer Camp</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td><strong>Total Units</strong></td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

* Students who are interested in instruction and field experience in forestry technical skills should choose option B.

For additional information, contact Dr. Richard Braham, E-mail: richard_braham@ncsu.edu or Phone: (919) 515-7568.

Minor in Wetland Assessment

The Undergraduate Minor in Wetland Assessment is an interdisciplinary, interdepartmental minor that is designed to provide the requisite knowledge of skills needed for entry-level competence in wetland delineation and assessment. The soils, hydrology, and plant identification courses of the minor build the scientific background and skills needed to understand the structure and functions of wetland ecosystems and to apply assessment protocols. The capstone course, NR 421 Wetland
Assessment, Delineation and Regulation focuses on further development of knowledge and skills in applying wetlands assessment, delineation, and regulation procedures. The Undergraduate Minor in Wetland Assessment consists of 17 credit hours. PB 405 Wetland Flora and FOR (NR) 420 are prerequisites of NR421, and therefore, must be completed before enrolling in NR 421. For details about the minor contact Dr. Ryan Emanuel. Email: ryan_emanuel@ncsu.edu.

Curricula in Natural Resources

Two natural resources curricula are offered by the Department of Forestry and Environmental Resources. The curricula are also accredited by the Society of American Foresters and produce natural resources professionals with a broad interdisciplinary background coupled with specifically focused skills needed to manage natural resources. The Natural Resources curricula include a series of common courses to highlight the integrated nature of work by interdisciplinary teams.

The curriculum in Natural Resources Ecosystem Assessment produces graduates who have knowledge and skills to inventory and describe ecosystems characteristics and to evaluate the impacts of management decisions. Ecosystem assessment or environmental impact assessment is an important part of development planning that calls for individuals who understand ecosystem structure and processes; who can identify, measure, inventory, and describe ecosystems; and who can apply standard evaluation and classification systems such as wildlife habitat evaluation procedures and the federal wetland delineation criteria. The curriculum entails a strong science base, as well as advanced courses in sampling and measurements, vegetation, soils, hydrology, and wildlife and fisheries are added. The 400-level courses also address techniques and issues of natural resource management.

The curriculum in Natural Resources Policy and Administration produces graduates who have knowledge and skills to manage natural resources programs in a variety of settings and organizations with an emphasis on public agencies. The advanced courses of the curriculum provide background in economics, policy, government, public administration, and natural resources management. An economics track begins with introductory microeconomics and culminates with environmental economics and public finance. Courses in government and public administration provide knowledge of how public institutions work. Courses in forestry, wildlife and fisheries, and outdoor recreation provide techniques of managing natural ecosystems for various uses. A common thread of how public policy on natural resources is influenced and developed runs through many of the courses already noted and culminates in two senior courses that focus on policy. For information on entrance requirements, contact the program coordinator: Dr. George Hess, Department of Forestry and Environmental Resources, NCSU, Box 8008, Raleigh, NC 27695-8002. Phone: (919) 515-7437, Fax: (919) 515-8149, E-mail: george_hess@ncsu.edu.

Opportunities

Graduates of the Natural Resources Ecosystem Assessment curriculum work in environmental service firms, public agencies, non-governmental organizations, and industries. The U.S. Environmental Protection Agency, the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, the N.C. Division of Water Quality, and county and city governments employ graduates to help manage compliance with county, state, and federal environmental regulations, particularly wetlands and protected species. Non-governmental organizations and private engineering and environmental consulting firms employ graduates to prepare environmental impact statements and assessments, delineate wetlands, and conduct searches for threatened or endangered plant and animal species. The broad background in natural resources provided by this curriculum also provides a strong base for students interested in graduate school or environmental law.

The curriculum in Natural Resources Policy and Administration produces managers and administrators for public agencies and private organizations involved with management, administration, policy-making, planning, preservation, or regulation of natural resources. Examples are the USDI National Park Service, the US Environmental Protection Agency, the US Geological Survey, state and local government agencies, and not-for-profit environmental organizations. Background in government, economics, policy, and natural resource management also provides a strong base for students who wish to pursue a graduate program in natural resources economics and policy or environmental law.

Curricula in Environmental Sciences

This area of study uses interdisciplinary approaches that link natural science and social science disciplines, and a knowledge of environmental systems and earth processes. Such interdisciplinary approaches are essential for understanding changes in a rapidly changing world, and for understanding our past, present, and future. Environmental scientists will help ensure human prospects by improving both socio-economic development and environmental quality through innovation in new technologies and policies.

Public interest about environmental issues is increasing. Protecting and improving the environment involves knowledge and systematic problem-solving skills that are essential for environmental sciences. North Carolina State University's environmental sciences degree program provides sound, individualized academic programs for students who can develop a wide range of careers. For information on entrance requirements, contact the program coordinator: Erin Champion, Department of Forestry and Environmental Resources, NCSU, Box 8008, Raleigh, NC 27695-8008. Phone: (919) 513-2520, E-mail: eachampl@ncsu.edu (terrie_litzenberger@ncsu.edu).

Opportunities

The Environmental Sciences program provides opportunities for students to rigorously explore complex, interdisciplinary environmental issues by combining courses from a number of NC State colleges to create a thorough interdisciplinary grounding. All degree options encourage students to pursue original research and gain field experience tackling real-world challenges — leaving them well prepared to take advantage of career opportunities once they graduate. Some graduates find jobs in the environmental industry, including careers as environmental consultants, working in large corporations, or starting their own businesses. Others find careers working in federal, state, and local agencies with environmental mandates. Still others continue their educations in professional and graduate schools.

Minor in Environmental Sciences

The Environmental Sciences minor is interdisciplinary, and open to all undergraduate degree students at NC State (except majors in Environmental Sciences) interested in understanding human impacts on the environment, and recognize economics and socio-political ramifications on the environment. This minor connects topics from a student’s major to the compelling, contemporary issues of energy, sustainability, and the environment. Students interested in an ES minor
must complete the three of the ES core courses (ES 100, 200, and 300) and two recommended electives in the course lists below.

**Biological Science**
- MEA 220 Marine Biology 3
- FW 221 Conservation of Natural Resources 3
- PB 360 Ecology (*This course has a prerequisite) 4
- BIO 181 Introductory Biology: Ecology, Evolution, and Biodiversity 4
- FOR 252 Introduction to Forest Science 3

Total Units: 17

**Physical Science**
- MEA 101 Geology I: Physical 3
- MEA 110 Geology I Laboratory 1
- MEA 130 Introduction to Weather and Climate 3
- MEA 135 Introduction to Weather and Climate Laboratory 1
- MEA 200 Introduction to Oceanography 3
- SSC 200 Soil Science (*this course has a prerequisite) 3
- CE 373 Fundamentals of Environmental Engineering 3

Total Units: 17

**Social Science**
- IDS 201 Environmental Ethics 3
- IDS 303 Humans and the Environment 3
- STS 322 Technological Catastrophes 3
- PS 320 U.S. Environmental Law and Politics 3
- PS 336 Global Environmental Politics 3

Total Units: 15

**Advanced Courses**
- MEA 300 Environmental Geology (*this course has a prerequisite) 4
- NR 460 Renewable Natural Resource Management and Policy 3
- ET 410 Toxic Substances and Society 3
- NR 406 Conservation of Biological Diversity 3
- SOC 450 Environmental Sociology 3
- SSC 421 Role of Soils in Environmental Management 3
- EC 436 Environmental Economics 3

Total Units: 22

**Curriculum in Environmental Technology and Management**

Environmental Technology and Management offers a comprehensive teaching and research program, preparing students for careers within the arenas of environmental regulation, environmental site assessment, and environmental health and safety. This curriculum prepares graduates to collect data, analyze and interpret those data, and determine appropriate solutions for sound environmental management. The curriculum focuses on the sciences behind the biological and chemical mechanisms of environmental processes. Students learn how to deal with a range of topics from every day environmental management activities to natural and man-made disasters such as chemical spills, fires, hurricanes, oil spills, and more. Many Environmental Technology courses emphasize hands-on training with state-of-the-art monitoring equipment. An internship to obtain actual working-world experience is required. For information on entrance requirements, contact the program coordinator: Terrie Litzenberger, Department of Forestry and Environmental Resources, NCSU, Box 8008, Raleigh, NC 27695-8008, Phone: (919) 515-7581, Fax: (919) 515-6193, E-mail: terrie_litzenberger@ncsu.edu.

**Opportunities**

Career opportunities include technical positions with: firms that offer environmental services; manufacturing companies that are required to maintain sophisticated environmental monitoring networks; consulting and audit firms that perform independent environmental audits; and state and federal regulatory agencies. A number of graduates have also pursued graduate degrees. Several professional certifications can be achieved through the major. Students may receive Hazardous Waste Operations and Emergency Response training and are eligible to sit for two professional certification exams: the exam for certification as an Associate Environmental Professional, and the exam Certified Hazardous Materials Manager.

**Curricula in Fisheries, Wildlife, and Conservation Biology**

The Department of Forestry and Environmental Resources administers the Fisheries Wildlife and Conservation Biology Program, which is shared among the College of Natural Resources, the College of Agriculture and Life Sciences, and the College of Veterinary Medicine. The undergraduate curriculum prepares the student for the Bachelor of Science in Fisheries, Wildlife, and Conservation Biology degree concentrating in either Fisheries Science, Wildlife Science, or Conservation Biology. The program emphasizes application of ecological principles to management of fisheries and wildlife populations and habitats. The curriculum integrates biological sciences with social sciences, mathematics, physical sciences, and specialty courses in fisheries, wildlife, and conservation biology to give students a well-rounded undergraduate education and to prepare students for graduate school.

The Fisheries, Wildlife, and Conservation Biology Program facilitates and provides opportunities for student internships, cooperative education and professional society interactions that are extremely valuable in preparation for future employment. The Student Chapter of the Leopold Wildlife Club and the Student Fisheries Society offer students in all levels of study the opportunity to network, to perform community service, and to learn from professionals in their chosen field. For information on entrance requirements, contact the program coordinator: Dr. Lara Pacifici, Undergraduate Coordinator, Fisheries, Wildlife, and Conservation Biology Program, Department of Forestry and Environmental Resources, NCSU, Box 7646, Raleigh, NC 27695-7646, Phone: (919) 515-3431, Fax: (919) 515-5110, E-mail: lara_pacifici@ncsu.edu.

**Fisheries and Wildlife Summer Program**

Four courses comprise the six-week summer session that is required of all fisheries and wildlife majors. These courses, offered in part at Hill Forest, a residential camp about one hour from Campus, provide the opportunity for intense study and practical application in fisheries and wildlife management. Additionally, one course is offered at Great Smoky Mountains National Park on the border of Tennessee and North Carolina.
and another course is offered in coastal North Carolina studying marine and estuarine habitats.

Specific curriculum requirements are available at https://cnr.ncsu.edu/fer/current-undergraduates/student-experience/internships/.

**Minor in Wildlife Science**

The objective of the wildlife sciences minor is to provide students, who might pursue careers in related areas of natural resources management, with basic ecological and management knowledge about wildlife resources. Additionally, the minor will provide students majoring in unrelated fields an appreciation for the value of wildlife resources and the need for sound management. Requirements: 16-17 credit hours:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>FW 221</td>
<td>Conservation of Natural Resources</td>
<td>3</td>
</tr>
<tr>
<td>PB/AEC 360</td>
<td>Ecology</td>
<td>4</td>
</tr>
<tr>
<td>or FOR 260</td>
<td>Forest Ecology</td>
<td></td>
</tr>
<tr>
<td>FW 353</td>
<td>Wildlife Management</td>
<td>3</td>
</tr>
<tr>
<td>Choose two of the following:</td>
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<td></td>
</tr>
<tr>
<td>FW 333</td>
<td>Conservation Biology in Practice</td>
<td>6</td>
</tr>
<tr>
<td>FW 373</td>
<td>Vertebrate Natural History</td>
<td></td>
</tr>
<tr>
<td>FW 403</td>
<td>Urban Wildlife Management</td>
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<tr>
<td>FW 404</td>
<td>Forest Wildlife Management</td>
<td></td>
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<tr>
<td>FW 411</td>
<td>Human Dimensions of Wildlife and Fisheries</td>
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<tr>
<td>FW 444</td>
<td>Mammalogy</td>
<td></td>
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<tr>
<td>FW 460</td>
<td>International Wildlife Management and</td>
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<tr>
<td>Conservation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Units</td>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

**Opportunities**

As increased discretionary time becomes available for large segments of the American population, opportunities for growth in the leisure service professions have increased dramatically. Tourism and sports are two of the world’s largest industries. A recreation and park professional’s goal is to influence people to use their discretionary time wisely and to improve the quality of their lives. This goal is accomplished by providing recreation programs and facilities for people in a variety of settings.

Career opportunities include employment by park and recreation departments operated by county and municipal governments; state agencies, such as state parks; federal government, with agencies such as the National Park Service, U.S. Army Corps of Engineers, and U.S. Forest Service; resorts and country clubs; and sport agencies.

Other major employers include youth and family service organizations, such as the YMCA, YWCA, Boy’s Clubs, and Boy and Girl Scouts. Industries employ recreation directors to head employee recreation programs. Areas with perhaps the greatest growth potential for employment are tourism agencies and commercial recreation establishments, such as resorts, private clubs, theme parks, and convention and conference centers. Sport management is also a growing profession with career opportunities in sports marketing and sales, game day operations, facility management and community athletics.

**Scholarships**

The Department of Parks, Recreation, and Tourism Management annually awards scholarships that are available to freshmen and advanced students. Approximately 12 academic scholarships varying between $500 and $5,000 are awarded in the spring for the following academic year and are renewable provided that superior progress is made toward a degree.

**Curriculum in Parks, Recreation and Tourism Management**

The curriculum in Parks, Recreation and Tourism Management is a professional program accredited by the Council on Accreditation of Parks, Recreation, Tourism and Related Professions. The curriculum produces graduates with a broad education in natural science, humanities and social science, and communication skills and the professional and technical skills to plan recreation programs and manage facilities, manage parks, and operate tourism services and agencies. General education courses include geology, biology, psychology, sociology, English, mathematics, communication, and economics. A specialized course is required in statistics.

The curriculum is designed to prepare students for a variety of positions in a dynamic and challenging profession. The focus of the curriculum is on management rather than face-to-face leadership. The curriculum provides 35 hours of professional course work that includes recreation philosophy, recreation facility management techniques, fiscal management, supervision, facility and site planning, recreation programming, administration, and evaluation.

In addition to the general education requirements and the core professional requirements, students can attain specialized training through concentration courses. They choose one of the following concentrations: tourism and commercial recreation, park and natural resource management, or program management.
Academic studies on campus are supplemented by practical laboratory experiences in the Raleigh area, out-of-state field trips and service learning opportunities, and a 10-week internship with a park, recreation or tourism agency. Cooperative work-study programs are available. Study abroad opportunities are also encouraged.

Concentrations

Park and Natural Resource Recreation (18 hours)
This concentration is well suited for people who enjoy working outdoors, who are interested in environmental protection and conservation, facility planning and development, and for those wanting to make a positive impact on the lives of others and on the natural environment. Concentration courses include ecology, GIS, outdoor recreation management and adventure education. Students are prepared for positions in planning, managing and maintaining parks and other natural resource oriented areas at the federal, state, regional or local levels in settings ranging from primitive to urban.

Sustainable Tourism (18 hours)
This concentration is for students who enjoy working with people; who are interested in business management, marketing, travel, and event planning; and, for students who want to make a positive impact on the leisure experiences of others. Concentration courses include sustainable tourism, destination management, accounting, tourism, poverty and health, and business management. The tourism and commercial recreation concentration prepares students for positions in planning, marketing and managing tourism facilities, attractions, and products. The positions could be with private companies, nonprofit groups or public agencies.

Program Management (18 hours)
Program Management is designed for students interested in designing and delivering recreation programs or events for diverse audiences in a variety of settings. Students take classes in special event programming, adventure programming, marketing, community development, and interpretive programs. Possible professional positions include recreation program director, event planner, outdoor adventures instructor, youth director and facility manager. Positions could be with public agencies, nonprofit group or private companies.

Specific curriculum requirements are available on the Student Services website (https://studentservices.ncsu.edu) or the PRTM website (https://cnr.ncsu.edu/prtm).

Curriculum in Sport Management
The Sport Management degree provides students with high quality educational experiences to enable their success as managers in sport and sport related industries and organizations. NC State’s Sport Management program will provide students with a multidisciplinary perspective that includes sound management principles combined with a global understanding of sport and the impact of sport in social, economic, political and technological environments. Sport can be viewed as both an industry and an academic discipline. This program will educate students in the theoretical principles of sport management as well as the application of those principles. The interdisciplinary curriculum, including courses in recreation and accounting, will enable students to develop leadership, communication, evaluation and problem-solving skills in a “real world” environment.

The curriculum provides 38 hours of professional course work that includes recreation philosophy, management techniques and skills, sport finance and economics, sport law, programming, administration, and analysis and evaluation. Students can use the 30 hours of free electives in this program to pursue a minor or design a special track that will meet their career goals. Academic studies on campus are supplemented by a 10-week internship with an approved sport agency.

Specific curriculum requirements are available on the Student Services website (https://studentservices.ncsu.edu) or the PRTM website (https://cnr.ncsu.edu/prtm/current-undergraduates/ug-programs).

Minor in Parks, Recreation and Tourism Management
The academic minor in Parks, Recreation and Tourism Management is offered to students interested in gaining a basic knowledge of the parks, recreation and tourism fields and an understanding of the importance of leisure and recreation in American society. It is not intended to prepare students for a professional career in parks, recreation, sport, and tourism. Six hours of required courses and nine hours of electives are necessary to complete the minor. The program provides a background in recreation and park management which is useful to students who will assume full-time careers associated with recreation and park services and become involved in the park and recreation field as a volunteer, program leader, or policy making board member with such organizations as the Scouts, Y’s, art advisory councils, and conservation organizations.

Admission
Any undergraduate student enrolled in the university as a degree candidate is eligible for admission to the minor program. The undergraduate curriculum coordinator of Parks, Recreation and Tourism
Management will advise students regarding their plan of work and process all necessary records.

Requirements for Admissions and Completion

Students should see the minor adviser, Dr. Candace Goode Vick, for both admission and certification of the minor. She can be reached at (919) 513-3939, or cvick@ncsu.edu. The minor must be completed no later than the semester in which the student expects to graduate from his or her degree program.

Online application for the minor should be completed no later than the registration period for the student’s final semester at NC State.

Requirements

A minimum of 15 hours (5 courses required to complete the minor in Park, Recreation & Tourism Management)Student must take PRT 152 and PRT 358 grade of “C-” or better is required in all courses to be used toward the minor.

College of Textiles

1020 Main Campus Drive - NC State University
Box 8301 Raleigh, NC 27695-8301
Phone: (919) 515-6640

Visit the College of Textiles website (https://textiles.ncsu.edu)!

Textiles encompasses every aspect of our daily lives with applications in medicine, space, recreation and sports, fashion, personal safety, sustainability, energy, transportation, household and geotextiles. The textile industry continues to become more dynamic with an increased emphasis being placed on the use of new technology. For example, imagine wearing clothes that have electronics incorporated within them that allow them to change colors, monitor your heart rate or track your location; soldiers wearing uniforms made from nano-fibers that protect them from biological and chemical agents; artificial arteries, bones, ligaments and skins made from textile substrates and polymers; or getting your apparel custom made in a matter of minutes through body scanning, computer-aided design and computer-aided manufacturing.

The approximately 10,000 alumni of the College of Textiles hold diverse positions. Graduates of the department of Textile and Apparel, Technology and Management go on to careers including executive management positions for major textile organizations, retail buying, manufacturing management, marketing and sales, corporate management, design, sourcing, supply chain management, quality control and personnel management. Graduates of Textile Engineering, Chemistry and Science go on to careers in diverse industries represented by companies including Nike, North Face, HanesBrands, Under Armour, Duke Hospitals, Bank of America, Patagonia, Abercrombie and Fitch, Milliken & Company and Technimark. Many graduates of these programs pursue graduate degrees in Polymer Engineering, Chemical Engineering, Chemistry, Textile Chemistry, Textile Engineering, and Industrial Engineering, as well as professional degrees in Analytics, Medicine, Dentistry and Law. These textile graduates enter an exciting arena where they bring their creativity to the design/development process and their management decision-making skills to the industry. Graduates are key strategists in managing global textile-related operations. Developing engineering systems and products for industry, space, medical textiles, apparel, home textiles, transportation and nonwovens provide exciting opportunities.

The job market remains excellent with the college maintaining one of the university’s best career placement records with an average rate of 90 percent or better each year. Demand for textile graduates from NC State University is particularly strong, due mainly to the strength of the academic programs and the College’s strong working relationships with industry and government. These programs are offered by two degree granting departments: Textile and Apparel, Technology and Management, and Textile Engineering, Chemistry and Science.

Degree Programs

The College of Textiles offers a broad choice of curricula from which to choose. Bachelor of Science programs in Textile Technology, Fashion and Textile Management, Fashion and Textile Design, Textile Engineering, and Polymer and Color Chemistry are available. These programs allow students to choose from a wide range of courses in addition to required core courses. The textile student’s curriculum includes humanities, social sciences and basic sciences and may include concentrations in business, economics, medical textiles, forensics, industrial engineering, mathematics, physics, chemistry, computer science, or statistics. Dual degree possibilities are open to textile students, usually requiring at least two semesters of additional study.

The dual degree for Textile Engineering and Chemical Engineering meets requirements for bachelor’s degrees in both Textile and Chemical Engineering in only nine semesters. Students in this dual degree program select the Chemical Processing Concentration of Textile Engineering.

Facilities

The College of Textiles consists of nearly 200,000 square feet of modern laboratories, studios, classrooms and offices, with plans to expand in the near future. The College is located on Centennial Campus, which is adjacent to NC State University’s central campus. Centennial Campus is a “technopolis” that combines the university, corporate and government research and development facilities. There is no other campus or research park quite like this 1,334 acre site. The College of Textiles is also across the street from the internationally known James B. Hunt, Jr. Library.

Scholarships

The College of Textiles, with tremendous support from the North Carolina Textile Foundation and friends of the College of Textiles, has established an outstanding scholarship program for incoming freshmen and current textile students. The College of Textiles currently supports a larger percentage of its students with scholarship support than any other college at NC State University.

Centennial Scholarships are currently valued between $15,000 and $22,000 per year for both in-state and out-of-state students, and offers a $7,500 enrichment fund per recipient for educational enhancement activities. Candidates must be nominated by their high school or home school by Nov. 1, or must self-nominate before Nov 15. The application deadline for all College of Textiles scholarships is Dec 1. Restrictions do apply. Additional smaller scholarships are available through the Centennial Scholarship process as well. Contact Kent Hester at (919) 515-6530 for full details.
Exchange Program

Students at NC State have the opportunity to study abroad at universities in North and South America, Europe, Asia, Africa, and Australia/Oceania. Students can study abroad for as short a time period as one week or for as long as an entire academic year. Some financial assistance is available through the College of Textiles for students participating in study abroad opportunities.

Additional information about exchange opportunities for College of Textiles students can be obtained from the College of Textiles website (https://textiles.ncsu.edu/current-students/current-undergraduate/international-engagement) or by contacting Liz Moran, Director of Advising and Admissions, at emoran@ncsu.edu or by telephone at (919) 515-0030.

Student and Career Services

The Office of Student Services is responsible for career services and scholarship programs for the College of Textiles. The Career Services Office brings together industry recruiters and students for interview sessions for permanent and summer employment. Alumni may also take advantage of the placement office. Job opportunities for summer employment are available for textile students. Placement assistance is available through the college career services office and frequently can be arranged in the student’s home community as well as global locations.

Textiles Online Programs (TOP)

The College of Textiles at NC State University is considered the global leader in textile innovation and technology. We teach a wide range of individual courses (http://textileonline.tx.ncsu.edu/online-courses/undergraduate-online-courses) online as well as a graduate certificate in Nonwovens; a Master of Textiles (http://textileonline.tx.ncsu.edu/online-graduate-programs/master-of-textiles) degree; and a Master of Science (http://textileonline.tx.ncsu.edu/online-graduate-programs/master-of-science) in textile chemistry. On-campus students can register for online courses. The student must be able to take quizzes and exams with the on-campus class or make arrangements with the professor to take it at a different time. Please visit our website to learn even more about our program.

Curricula

The B.S. in Fashion and Textile Management has two concentrations. The Textile Brand Management and Marketing Concentration focuses on studying textile branding strategies, consumer trends, product trends, licensed products, and the global textile marketplace dynamics. The Fashion Development and Product Management Concentration focuses on design and development of fashion products, integrating trend analysis, computer-aided-design, coloration, silhouette selection, pattern making, fabric selection, consumer research, costing, sourcing and quality assessment. Students in both Fashion and Textile Management concentrations are encouraged to pursue global studies, including study abroad, to further enhance their understanding of global market opportunities.

The B.S. in Fashion and Textile Design offers an excellent opportunity for students to pursue interests in Fashion Design and Textile Design Concentrations with focus on designing innovative textile and fashion products utilizing the knowledge taught in Design Thinking, Textile Products Characteristics, Niche Market analysis, Color Science, Computer Aided Design, Drawing and Illustration and Senior Design. To gain global experience in the field, students study abroad for one semester in the junior year, in locations known for Fashion and Design Innovation and Creativity, such as France, England, Italy, the Czech Republic, Australia, China and India.

The Department of Textile and Apparel Technology and Management has state of the art laboratories and studios including the Textile Management Science Laboratory, Digital Design Center, Fashion Studio, Textile Design Studio, Surface Design Studio, Filament and Technology Lab, Specialty Software Computer Lab, and Digital Printing and Seamless Knitting Studio.

Specific curriculum requirements are available on the Registration and Records website.

Career Management (Internships and Full-time Employment)

The Department places a key importance on career management preparation for our students and strongly encourages internships as a preparation for full-time employment. A recent industry gift provides additional preparation for our students combined with student services preparation.

Journal

The department publishes an online electronic journal quarterly, Journal of Textile and Apparel Technology and Management (JTATM), which provides industry, government and academic personnel with the timely dissemination of textile information. With a readership in excess of 10,000 persons (industry, government, and academic professionals), JTATM serves as an effective communication vehicle regarding the latest textile innovations, both management and development, in the field. Faculty and students utilize this resource in coursework and research efforts. Visit the Journal of Textile and Apparel, Technology and Management online http://ojs.cnr.ncsu.edu/index.php/JTATM!
Department of Textile Engineering, Chemistry and Science

The Department of Textile Engineering, Chemistry, and Science offers Bachelor of Science degrees in Polymer and Color Chemistry, Textile Engineering, and Textile Technology as well as several minors. The department is uniquely interdisciplinary, dedicated to providing instruction in the science, engineering, and technical application of chemistry, color, polymers, bio-medicals, design, and production with regard to fibers and fiber-based materials.

Polymer and Color Chemistry

The B.S. in Polymer and Color Chemistry is a flexible and rigorous program that provides courses in fundamental chemistry, while incorporating some unique areas of applied chemistry in polymers and color chemistry. The applied courses are heavily oriented to the chemistry and technology of polymers, including polymer synthesis, extrusion and characterization. In addition, the color chemistry component of the degree includes the synthesis and application of dyes and other compounds associated with the coloration of materials, as well as the science of color perception and color measurement.

The degree program offers three concentrations: American Chemical Society (ACS) Certified, Science and Operations and Medical Sciences. The ACS Certified concentration is designed for students wishing to pursue advanced studies in chemistry and related subjects and the Medical Sciences Concentration is for those students who wish to pursue medical school, dental school, pharmacy or optometry. This concentration includes all courses a student will need for application to these professional programs. Each concentration incorporates a number of electives allowing students to develop focus areas, including medical textiles, polymer chemistry, and color chemistry. More information about the degrees is available on the the TECS PCC website.

Textile Engineering

The B.S. in Textile Engineering provides a broad base of fundamental engineering courses as a foundation for studies in textile engineering. The textile engineering courses deal with the application of scientific and engineering principles to the design and control of all aspects of fiber, textile and apparel processes, products and machinery. These include natural and man-made materials, interaction of materials with machines, safety and health, energy conservation, six-sigma quality, and computer information systems. The B.S. in Textile Engineering is offered jointly with the College of Engineering. For more details about the program, see description under the College of Engineering (p. 85).

Textile Technology

The B.S. in Textile Technology provides students with basic knowledge of fiber materials, science and technologies of fiber processing, as well as fiber-based product design and development. The curriculum prepares students in product design and development processes, beginning with understanding of application to material selection to appropriate technologies to utilize.

The Textile Technology degree program offers a well rounded versatile degree, which prepares graduates to collaborate effectively with professionals in a global interdisciplinary environment. After introductory exposure to several of the fundamental aspects of fiber science and textile technology, the student can build additional depth in one of the three concentrations of Medical Textiles, Technical Textiles, and Textile Supply Chain Operations or stay in the general degree which allows students the flexibility of designing their own interest or transferring from other programs or community colleges. The Medical Textiles concentration covers design and methods of production of state-of-the-art textile products and devices used in medical applications including sutures for wound closing to cardiac support devices. The Technical Textiles concentration covers design principles, understanding of applications, and technologies relevant to the vast array of technical textiles materials and products used in such areas as transportation, storage, packaging, automobile engineering, geotechnical engineering, and much more. This concentration offers two options: Materials and Non-wovens. The Textile Supply Chain Operations concentration focuses on the design, management, and coordination all the activities required to transform raw materials into finished textile products to retail. More information about the degrees is available on the TECS TT website.

Minors offered in Textile Engineering, Chemistry and Science

The department offers several minors to students who do not want to double major in one of the degrees but would like to get some of the same experiences.

Minor in Polymer and Color Chemistry

The minor in Polymer and Color Chemistry is available to majors in any field except Polymer and Color Chemistry. The program is designed to expose students to the technical and scholarly disciplines of polymer chemistry, fiber formation, color physics, dyeing, and chemical modification of fibers and fabrics, and gives them an opportunity to learn how basic disciplines are applied in an industrial environment. Any interested students should contact the Department of Textile Engineering, Chemistry, and Science for information about the minor and its prerequisites.

Minor in Textile Technology

The minor in Textile Technology is available to majors in any field except Textile Technology. The program allows students to explore the principles of textile technology and design using fibrous media. Students also have the opportunity to use textile technology facilities and state-of-the-art computer aided design systems as part of the minor. Any interested students should contact the Department of Textile Engineering, Chemistry, and Science for information about the minor and its prerequisites.

Minor in Nonwovens

The minor in Nonwovens is available to majors in any field except Textile Technology. Nonwovens is a 20 billion dollar industry just in North Carolina and covers a wide range of products and usages from filtration systems for purifying air, blood and water, various types of wipes, many medical applications, etc. The processing of nonwovens depends on a range of technologies, some adapted from the textile and paper industries, others developed uniquely for nonwovens production. This program will allow the student to take those textile technology classes that deal with nonwoven processes and products as well as exposed to all the equipment.
The College of Sciences offers programs for students interested in working side-by-side with world-class faculty to address the grand challenges of our time, particularly those related to health, energy, safety and security, and the environment. The college's programs of study and research are offered at both the undergraduate and graduate levels and lead to many career opportunities. In addition, the college provides core science, statistical and mathematical education support for the entire university. The college consists of six academic departments: Biological Sciences (https://bio.sciences.ncsu.edu), Chemistry (https://www.ncsu.edu/chemistry), Mathematics (http://www.math.ncsu.edu), Physics (http://www.physics.ncsu.edu), Statistics (http://www.stat.ncsu.edu), and Marine, Earth and Atmospheric Sciences (https://meas.sciences.ncsu.edu). The Center for Research in Scientific Computation, the Center for Quantitative Sciences in Biomedicine, the Bioinformatics Research Center (https://brc.ncsu.edu), the State Climate Office (http://climate.ncsu.edu), the Center for Marine Sciences and Technology (https://cmast.ncsu.edu), and the W.M. Keck Center for Behavioral Biology (http://keck.sciences.ncsu.edu) are also associated with the college.

Graduates of the college are in demand and valued for their well-developed analytical thinking and problem-solving skills. They are recruited for technical and administrative positions in industry and laboratories, universities and colleges, non-profit research organizations, and government agencies. A large percentage of the graduates undertake advanced study in medical, law, business, or other professional schools as well as further study leading to master’s and doctoral degrees.

High school students who are interested in mathematics, statistics, biology, medicine, chemistry, geology, marine science, meteorology or physics; fascinated by natural phenomena; and want to advance economic, societal and intellectual prosperity for everyone should consider the career opportunities opened by degrees in the sciences.

Degree Programs


Many curricula within the college have similar freshman years, enabling a first-year student to change from one department to another in the college without loss of time. The Life Sciences First Year Program (https://www.ncsu.edu/life-sciences-first-year), a collaborative venture between the College of Agriculture and Life Sciences and the College of Sciences, offers students interested in life sciences majors a common first year curriculum, a peer mentoring program, seminars, a peer class facilitator program, outstanding academic advising, and more to help the students explore the variety of life science majors available at NC State before they decide on a particular major.


Pre-Medical Sciences

Medical and dental schools as well as many other health-related professional schools have long regarded degree programs in the core biological, physical, earth system and mathematical sciences as excellent pre-professional curricula. Some professional schools prefer the in-depth knowledge gained by this route over those curricula which offer a cursory view of a variety of topics. For further details, visit the Health Professions Advising (https://hpa.dasa.ncsu.edu) web site.

Dual Degree Programs

Students may wish to earn bachelor’s degrees in two fields within the college. Other students may wish to combine a bachelor’s degree in Sciences with one in another NC State college. With effective planning, a number of courses can satisfy core, general education, or elective requirements simultaneously in both degree programs. For example, many students choose to pursue simultaneous degrees in mathematics and mathematics education or one of the physical, biological or earth system sciences and science education.

Student Activities

In addition to university-wide extracurricular activities and honor organizations, the College of Sciences has clubs and student chapters of professional and honor organizations:

- Alpha Chi Sigma (AXE), a national co-ed professional chemistry fraternity
• American Chemical Society (ACS) Student Affiliates
• American Meteorological Society (AMS) – Student Chapter
• Association for Women in Mathematics (AWM) Student Chapter
• Astronomy Club
• Biology Club
• Broadcast Meteorology Club/NC State Weather Club
• Genetics Club
• Geology Club
• Herpetology Club
• Microbiology Club
• Mu Sigma Rho (a statistics honorary society)
• Phi Lambda Upsilon (PLU) (a national honorary chemical society)
• Pi Mu Epsilon (PME) (a national mathematical honor fraternity)
• Research, Forecasting & Discussion (RFD) Club
• Research PackTrack Student Organization
• Roots and Shoots at NCSU
• Sciences Ambassadors
• Sciences Council
• Sigma Pi Sigma (a physics honor society)
• Society for Industrial and Applied Mathematics (SIAM) Student Chapter
• Society for Undergraduate Mathematics (SUM Club) (a student chapter of the Mathematical Association of America)
• Society for Multicultural Scientists (SMS)
• Society of Physics Students (SPS)
• Sounding Club
• Sports Analytics Club
• Statistics Club
• Zoology Club.

Additionally, majors in the college are eligible for induction in the national honor societies Phi Beta Kappa and Phi Kappa Phi.

Honors Programs

All departments in Sciences have active honors programs designed to encourage excellent undergraduates to pursue a program that will challenge their abilities and better prepare them for their post-graduate career. These programs feature a combination of independent research and honors course work, often at the graduate level. Students in an honors program are advised by honors advisers who help students customize their education based on their individual interests, talents and skills and who proactively present opportunities for academic study, research and study abroad. For information on a particular departmental program, please visit the departmental websites.

Facilities

Top research facilities give faculty and students access to advanced technology that helps spawn discovery. The College of Sciences and its affiliated units on campus have access to variety of state-of-the-art research facilities. The Biological Resources Facility and Toxicology Animal Facility (https://brf.sciences.ncsu.edu) provides centralized sites for the humane care of research animals while accommodating the research and teaching needs of faculty members at NC State, as well as researchers from private industry and governmental agencies, under conditions required by local and federal regulatory bodies. The Genomics Sciences Laboratory (https://research.ncsu.edu/gsl) provides sequencing and support services to the NC State and broader scientific communities on everything from project planning to DNA or RNA extraction to sequencing. The College of Sciences Instrument Shop (https://sciences.ncsu.edu/instrument-shop) is a full-service machine shop specializing in the custom fabrication, construction, and design of prototype research equipment and works closely with the faculty and students in the construction, fabrication, repair or modification of scientific instruments and equipment. The Nuclear Magnetic Resonance Facility (https://www.ncsu.edu/chemistry/nmr) in the Department of Chemistry is equipped with six nuclear magnetic resonance spectrometers for chemical analysis, supports research in the department and the wider university system, and is available to support the needs of other academic institutions, research laboratories, businesses and individuals. The Triangle Universities Nuclear Laboratory (TUNL) (http://www.tunl.duke.edu) is a U.S. Department of Energy Center of Excellence that focuses on low-energy nuclear physics research and is a consortium of the three major Triangle research universities: NC State, Duke University and the University of North Carolina at Chapel Hill. The X-Ray Structural Facility (http://www.xrays.ncsu.edu) serves the structural needs of the Department of Chemistry, the university community and organizations in the Research Triangle area, using single-crystal X-ray diffraction to determine the makeup of substances.

Living and Learning Communities

In addition to the variety of student housing options offered by the university, Sciences students have access to several specialized housing programs. Among them is the WISE Village (https://wise.ncsu.edu), a living and learning community created for first- and second-year female scientists, mathematicians, statisticians and engineers. The program combines a group-living experience with resident, upper-class mentors who help with the transition to university life.

Sciences students can also join their peers from across the university in the EcoVillage (https://ecovillage.dasa.ncsu.edu) in Bragaw Hall. The program encourages students to go beyond the classroom to lead, serve, create, problem-solve and engage in complex energy, environmental and sustainability issues locally and globally.

For a list of living and learning communities, see https://housing.dasa.ncsu.edu/villages.

Internships and Cooperative Education Programs, Field Experience, and Undergraduate Research

The college recognizes the value of career-related work experience to students and encourages its majors to work with the University Career Development Center (https://cdc.dasa.ncsu.edu) and the faculty and staff within the college to avail themselves of such opportunities whenever possible. Career-related experience may be gained through a number of activities including internships and cooperative education programs, department-sponsored field programs, summer employment and undergraduate research. Advisers work with students to develop a plan of study that balances a challenging course load with appropriate extracurricular activities.

Students also have opportunities to build their science communications skills through the college’s partnership with the North Carolina Museum of Natural Sciences (http://naturalsciences.org) in downtown Raleigh. Educators at the museum’s Nature Research Center (http://
can help students learn to better communicate their work to the public.

**Scholarships**

College of Sciences majors may be eligible for a variety of freshman and undergraduate college and departmental scholarships ([https://sciences.ncsu.edu/academics/student-support](https://sciences.ncsu.edu/academics/student-support)) in addition to those administered at the university level. The awards are based on a combination of factors, with a strong emphasis on academic excellence. Some scholarships are renewable for up to four years, and some carry opportunities for significant experiential learning and career-related work experience.

**Public Science Literacy and Community Outreach**

Public science ([https://sciences.ncsu.edu/public-science](https://sciences.ncsu.edu/public-science)) is a major part of the College’s science literacy initiative, which is based on the idea that a growing economy and important societal advances demand a leadership and populace that are scientifically literate. The College’s director of public science coordinates aspects of the College’s public science efforts, including citizen science, or scientific research conducted by the public; K–12 and informal science education; science communication; and innovation in public science.

The Science House ([https://sciencehouse.ncsu.edu](https://sciencehouse.ncsu.edu)) seeks to cultivate and diversify the pool of students pursuing degrees and careers in Science, Technology, Engineering and Mathematics (STEM) fields; to enhance the quality of teaching and learning in STEM education; and to communicate innovative scientific and educational research to the public.

The State Climate Office ([http://climate.ncsu.edu](http://climate.ncsu.edu)) is a public service center that applies atmospheric science to sensitive sectors in North Carolina. Through extension, research, and educational programs, the Climate Office works to improve the understanding and use of climate science for North Carolina and the broader southeastern United States.

**Tutorial and Audio-Visual Assistance**

Most of the departments in the college offer students some form of free tutorial assistance, including regularly scheduled review sessions, and the University Tutorial Center ([https://tutorial.dasa.ncsu.edu](https://tutorial.dasa.ncsu.edu)) offers Supplemental Instruction (SI) for selected sections of chemistry. Several departments provide facilities for students to use supplementary video- or computer-assisted instructional materials.

**Graduate Study**

Doctor of Philosophy and Master of Science degrees are available with majors in applied mathematics ([https://www.math.ncsu.edu/grad/prospective](https://www.math.ncsu.edu/grad/prospective)), biomathematics ([http://bma.math.ncsu.edu](http://bma.math.ncsu.edu)), mathematics ([https://www.math.ncsu.edu/grad/prospective](https://www.math.ncsu.edu/grad/prospective)), chemistry ([https://www.ncsu.edu/chemistry/graduate](https://www.ncsu.edu/chemistry/graduate)), functional genomics ([https://bio.sciences.ncsu.edu/graduate/graduate-programs/functional-genomics](https://bio.sciences.ncsu.edu/graduate/graduate-programs/functional-genomics)), genetics ([https://bio.sciences.ncsu.edu/graduate/graduate-programs/genetics](https://bio.sciences.ncsu.edu/graduate/graduate-programs/genetics)), operations research ([https://www.or.ncsu.edu/academics](https://www.or.ncsu.edu/academics)), physics ([https://www.physics.ncsu.edu/graduate](https://www.physics.ncsu.edu/graduate)), statistics ([http://www.stat.ncsu.edu/programs/grad](http://www.stat.ncsu.edu/programs/grad)), toxicology ([https://bio.sciences.ncsu.edu/graduate/graduate-programs/toxicology](https://bio.sciences.ncsu.edu/graduate/graduate-programs/toxicology)), and marine, earth and atmospheric sciences ([https://meas.sciences.ncsu.edu/graduate](https://meas.sciences.ncsu.edu/graduate)). The Doctor of Philosophy is also offered in bioinformatics ([https://bio.sciences.ncsu.edu/graduate/graduate-programs/bioinformatics](https://bio.sciences.ncsu.edu/graduate/graduate-programs/bioinformatics)), Master of Bioinformatics ([https://bio.sciences.ncsu.edu/graduate/graduate-programs/bioinformatics](https://bio.sciences.ncsu.edu/graduate/graduate-programs/bioinformatics)), Master of Biomathematics ([http://bma.math.ncsu.edu](http://bma.math.ncsu.edu)), Master of Climate Change and Society ([https://ccs.sciences.ncsu.edu](https://ccs.sciences.ncsu.edu)), Master of Financial Mathematics ([https://financial.math.ncsu.edu](https://financial.math.ncsu.edu)), Master of Functional Genomics ([https://bio.sciences.ncsu.edu/graduate/graduate-programs/functional-genomics](https://bio.sciences.ncsu.edu/graduate/graduate-programs/functional-genomics)), Master of Genetics ([https://bio.sciences.ncsu.edu/graduate/graduate-programs/genetics](https://bio.sciences.ncsu.edu/graduate/graduate-programs/genetics)), Master of Operations Research ([https://www.or.ncsu.edu/academics](https://www.or.ncsu.edu/academics)), Master of Statistics ([http://www.stat.ncsu.edu/programs/grad](http://www.stat.ncsu.edu/programs/grad)), Master of Toxicology ([https://bio.sciences.ncsu.edu/graduate/graduate-programs/toxicology](https://bio.sciences.ncsu.edu/graduate/graduate-programs/toxicology)), and Master of Zoology ([https://bio.sciences.ncsu.edu/graduate/graduate-programs/zoolo](https://bio.sciences.ncsu.edu/graduate/graduate-programs/zoolo))y are also offered. The Department of Statistics and the Department of Mathematics offer B.S.–M.S. programs that allow students to enroll in up to 12 credit hours of graduate level course work that may be applied toward the requirements of both the bachelor’s and master’s degrees.

**Department of Biological Sciences**

The Department of Biological Sciences provides educational opportunities to undergraduate and graduate students and conducts world class research in a variety of areas in modern biology. Undergraduate Programs in the Department of Biological Sciences have the primary mission of providing our diverse population of students with the opportunity and support to successfully complete their major and prepare for their post-baccalaureate life as independent thinkers, lifelong learners, and contributing members of society. Undergraduates begin with comprehensive studies of the structure, function, behavior, and evolution of cells, organisms, populations, and ecosystems and then have the opportunity to select upper division courses that reflect their intellectual interests and career goals. Those who earn a Bachelor of Science degree in Biological Sciences, Genetics, Microbiology or Zoology gain a strong background in biology and in related fields. Those who earn a Bachelor of Arts degree in Biology establish a solid foundation in the life sciences and also design a secondary area of focus to complement their studies in the life sciences. All incoming freshmen interested in majoring in any one of these degree programs will start their studies in the NC State Life Sciences First Year Program ([http://www.ncsu.edu/life-sciences-first-year](http://www.ncsu.edu/life-sciences-first-year)), and will explore these and related degree options during that first year while they take courses relevant to all life science degree programs at NC State. The Department of Biological Sciences also offers minors in Biological Sciences, Genetics, Microbiology, Environmental Toxicology, Forensic Science, and Zoology.

Specific curriculum requirements for majors are available on the Registration and Records ([http://www.ncsu.edu/registrar/curricula](http://www.ncsu.edu/registrar/curricula)) website. Specific requirements for minors are available on the Office of Undergraduate Courses and Curricula ([http://oucc.ncsu.edu/minors](http://oucc.ncsu.edu/minors)) website. See the Graduate Catalog for a listing of graduate degree programs.

**Opportunities**

Students who graduate from the Department of Biological Sciences are well prepared for employment in various government agencies and private industries. Graduates may continue their education with studies leading to advanced degrees in many areas of the biological sciences, including cell biology, ecology, microbiology, genetics, zoology, neurobiology, and biomedical disciplines. Many choose to seek advanced degrees in medicine, dentistry, optometry, veterinary medicine and other
health-related fields. Students who plan to seek certification for pre-college teaching may want to pursue a second major in the Department of Science, Technology, Engineering & Mathematics Education.

Undergraduate Majors

Bachelor of Science in Biological Sciences

There are five different avenues to earning a B.S. in Biological Sciences at NC State. Students studying for a degree in Biological Sciences can opt for a general curriculum (BLS) or can choose to focus in a particular area by selecting one of four areas of concentration: Molecular, Cellular, and Developmental Biology (MCD), Integrative Physiology and Neurobiology (IPN), Human Biology (HB), or Ecology, Evolution, and Conservation Biology (EEC). The MCD curriculum offers students in-depth studies of the molecular and cellular basis of life and the development of multicellular organisms. The IPN curriculum provides a comprehensive grounding in basic principles of physiology and neuroscience, as well as in-depth exposure to the application of these principles in understanding whole-organism function and the ways in which animals (including humans) cope with challenges presented by their environments. The HB curriculum provides training in those areas of science most important to health-related professions as well as relevant aspects of the humanities and social sciences. It is designed to provide students with a solid education in the scientific and humanistic concepts that underlie modern health sciences and related areas of scientific research. The EEC curriculum offers students in-depth studies in areas of biology at the level of the organism, populations, and ecosystems. It is designed for students who have an interest in whole organisms and their biodiversity — what maintains it, what environmental changes affect it, and how to protect it in the face of various challenges.

Bachelor of Arts in Biology

The NC State Bachelor of Arts degree in Biology is designed for students who want to combine studies in the life sciences with studies in a second discipline of interest (chosen from outside of the life sciences). Students in the B.A. are required to take just as much biology (through their Life Science Electives) as students in the B.S. in Biological Sciences, but requirements in the supporting sciences (chemistry, physics, and calculus) are reduced. Instead, Biology B.A. students identify a second area of interest outside the life sciences and create a focal area of study in that area (e.g., psychology, social work, communication, political science, anthropology, education). Their proposed list of Cross Discipline Electives is reviewed and approved by their academic advisor and the program director.

At the end of their undergraduate studies, students in this degree program will complete a Senior Capstone Project through which they will draw on both the life sciences (or a sub-discipline within the life sciences) and their chosen Cross Discipline to address a problem or issue that they identify. Experiential learning (related to their academic and/or career interests) is also required in this program.

Students who graduate with a B.A. in Biology will benefit from training in scientific thinking and from gaining a broader perspective through their Cross Disciplinary studies. In choosing courses, students are encouraged to consider the course pre-requisites of graduate or professional programs to which they are interested in applying. Depending on their course choices, students will be prepared for a wide range of careers or further studies. As a new program, there are only a few graduates to date, but these graduates are pursuing advanced study in law and in public health programs.

Bachelor of Science in Genetics

The Genetics program offers undergraduate majors classroom training in fundamentals of genetics and other sciences, as well as opportunities for meaningful research experience. The degree in genetics is the only genetics major offered in the UNC system.

The genetics major complements other degree programs in the biological and life sciences at N.C. State, as it prepares students for further graduate study, professional schools (such as medical, dental, veterinary, genetic counseling) or careers in industries whose products are based on biological and agricultural research, including biopharmaceutical and biotechnology companies. Building on the strength of NC State as a leader in science and technology, students in the program can easily earn a concurrent minor in any of the other life sciences curricula, as well as other programs such as statistics or biotechnology.

Responsible conduct as a scientist and citizen are emphasized in the genetics coursework, and students will also have opportunities for public service and engagement through participation in the genetics outreach program. Students will be challenged to master their coursework while practicing hands-on problem-solving in both the classroom and active research settings. Genetics students also will be required to read the primary literature and present papers and their research findings, thus gaining valuable experience in scientific communication.

Bachelor of Science in Microbiology

Microbiology is concerned with the growth and development, physiology, classification, ecology, genetics, and other aspects of the life process of an array of microscopic, generally single-celled, organisms and viruses. These organisms frequently serve as model systems for elucidation of fundamental processes that are common to all living cells. Most of the major discoveries that have produced spectacular advances in biology and genomic science during the past decade have resulted from studies of microbial systems. Future developments in biotechnology, production of food and fuel, and human and animal health will rely heavily on understanding microbial processes.

There are 4 avenues to earning a B.S. in Microbiology. Students can opt for a general curriculum (MBIO) or can choose to focus in a particular area by selecting one of three areas of concentration: Microbial Biotechnology (MBIO-MT) or Microbial Research (MBIO-MR) or Microbial Health Sciences (MBIO-HS). These concentrations mirror the three most common career paths of Microbiology majors: work in research laboratories and production facilities, further study in graduate school (at the Masters or Doctoral level), and further study in professional schools such as medical and dental schools.

Bachelor of Science in Zoology

The Bachelor of Science in Zoology curriculum concentrates on organismal biology, with an emphasis on animals. Required courses are designed to develop breadth and depth in core areas, providing a strong base for all Zoology majors. Students acquire a knowledge of zoology from the organizational level of molecules and cells to the organizational level of ecosystems, with flexibility in the selection of upper level courses to specialize or remain generalized, according to individual interests and career goals.
Undergraduate Minors  
(*find details at oucc.ncsu.edu/minors*)

**Minor in Biological Sciences**

The undergraduate minor in Biological Sciences serves to enhance the programs of students whose major fields are outside the biological sciences and who are interested in obtaining either a broad-based perspective in biology or a more focused exposure to a particular field within biology. It is available to all baccalaureate students except those majoring in Animal Science; Biochemistry; Biological Sciences; Fisheries, Wildlife and Conservation Biology; Genetics; Microbiology; Nutrition Science; Plant Biology; Plant and Soil Sciences; Science Education (Biology Concentration); Turfgrass Science; or Zoology.

Required courses (8 hours) provide an overview of the field of biology, then students select additional courses (at least 7 hours) from approved lists within biological sciences that best match their interests. Students also can complete this minor through Distance Education course offerings. Courses will count toward the minor only if they are completed with a C- or better.

**Minor in Environmental Toxicology**

Toxicology is an interdisciplinary field of study that integrates many physical, chemical, and biological principles that help us better protect human and ecological health. The undergraduate minor in Environmental Toxicology is available to all baccalaureate degree students at North Carolina State University. The minor is intended to provide undergraduate students with an understanding of how chemicals and physical agents can adversely affect biological systems and the environment, including the mechanisms of chemically induced toxicity, the fate and effects of chemicals in the environment, and the evaluation of chemical hazards and risks. The minor is especially appropriate (but not limited to) students majoring in the agricultural sciences, life sciences, physical sciences, or science education. The Environmental Toxicology minor requires 15 semester hours including 9 hours of required courses and 6 hours from a group of electives. A grade of C- or better is required for all courses taken to fulfill minor requirements.

**Minor in Forensic Science**

Forensic science involves the application of scientific principles and methodology to criminal investigations. It is an interdisciplinary field of study, drawing on numerous scientific disciplines. Students take one required course that introduces them to the field of forensics, and then they select electives from a variety of scientific perspectives, including anthropology, biology, chemistry, entomology, geology, and toxicology. Students are also strongly encouraged to include an ethics course in their minor studies. The undergraduate minor in Forensic Science requires a total of 15 semester hours. A grade of C- or better is required for all courses taken to fulfill minor requirements.

**Minor in Genetics**

The undergraduate minor in Genetics provides students with strong preparation in the principles of genetics as well as preparation in ancillary fields such as statistics, biochemistry and microbiology. This minor is appropriate for (but not limited to) students with majors in animal science, biochemistry, biological sciences, crop science, environmental sciences, fisheries and wildlife sciences, food science, forestry, horticultural science, microbiology, plant biology, plant and soil sciences, poultry science, and zoology. The genetics minor requires 18 hours — 12 specified, three restricted electives and three unrestricted electives.

A grade of C or better is required for all courses taken to fulfill minor requirements.

**Minor in Microbiology**

The undergraduate minor in Microbiology is available to all baccalaureate degree students at North Carolina State University who are not majoring in microbiology. The minor is especially appropriate for (but not limited to) students majoring in the biological sciences, bio-processing, physical sciences, or science education. The minor requires 15 semester hours including 8 hours of required courses and 7 hours from a group of electives. Any prerequisite courses are in addition to these courses. A grade of C- or better is required for all courses taken to fulfill minor requirements.

**Minor in Zoology**

The objective of the undergraduate minor in Zoology is to provide students with a solid foundation in zoological concepts, including diversity of the animal kingdom, morphology, physiology, evolution, behavior, and ecology. It is available to all baccalaureate students except those majoring in Biochemistry, Biological Sciences (BLS, MCD, IPN, HB, EEC), Environmental Science (Ecology concentration), Microbiology, Plant Biology, or Zoology. Laboratory experiences are an integral part of the minor. Courses will count toward the minor only if they are completed with a grade of C- or better.

**Distance Education Certificate in Microbiology**

The Undergraduate Certificate in Microbiology offers students the opportunity to further their understanding of microorganisms and the roles they play in the world in which we live. The intended audience of this certificate includes degree-seeking undergraduate students at institutions where a Microbiology major or minor is not available, and non-degree students seeking additional experience in microbiology for career advancement or to enhance their applications to professional, graduate, or allied health schools. This certificate may also improve the ability of K-12 science teachers to compete for positions or teach more effectively. Finally, this certificate provides an in-depth understanding of microbiology for those interested out of personal satisfaction. Degree-seeking students at NCSU and students who have completed or are currently enrolled in a Microbiology degree program (including a minor) are not eligible. The certificate requires 9 credit hours of required courses and 3 credit hours of electives. Courses will count toward the certificate only if they are completed with a grade of C- or better or S.

**Department of Chemistry**

**General Overview**

The Chemistry Department consists of approximately 250 undergraduate majors, 125 graduate students, 28 tenure track, 11 non-tenure track faculty, and 23 staff members in a variety of technical, instructional, and clerical support roles. The Department occupies three large buildings, Dabney Hall, Cox Hall and the Fox Undergraduate Laboratory. In addition, several research groups are located on the Centennial Campus.

Undergraduate Degrees. The Chemistry Department offers two undergraduate degree programs to meet the needs of students interested in chemistry: The Bachelor of Science (B.S.) is the degree that meets certification by the American Chemical Society through its Committee on Professional Training. The B.S. degree provides the breadth and depth
of experience to give graduates a wide choice of career options, and is especially suited for further study in chemistry graduate school or a career in the chemical industry. The Bachelor of Arts (B.A.) degree has fewer required chemistry courses and less laboratory time than the B.S. It provides more flexibility for students to design a chemistry program with more electives to meet a wider set of career goals or to pursue a double major.

The Chemistry Department typically graduates about 45-55 B.S. and B.A. chemistry majors each year, ranking in the top 50 in total graduates for the 600+ colleges and universities that offer the American Chemical Society accredited degree. Approximately one-half of graduates go to graduate or professional school, including the most elite institutions. The other half of our graduates who gain employment directly upon graduation are equally distributed among careers in the chemical industry, government, and careers outside of chemistry (including business and law).

**Honors Program**

Second semester sophomores or first semester juniors in the Chemistry B.S. program with an overall GPA of 3.5 or higher are invited to join the Chemistry Honors Program.

Chemistry Honors students must maintain a GPA of at least 3.25 to graduate with honors. In addition, the departmental requirement for students in the Honors Program is the completion of 9 extra credit hours of work NOT required by their degree programs. Between 3-6 credit hours can come from research conducted in laboratories in the Department of Chemistry. Research in other laboratories of molecular sciences may also be considered. However, in the latter case, prior approval is required. A 3-page report and a letter from the supervisor indicating the nature of the work, time spent in the lab, and performances are required at the end (before finals week) of the semester in which the research is conducted. It should be noted that simply working in a research lab does not necessarily meet the requirements of the Honors Program. The nature of the work must be meaningful research. The rest of the credit hour requirements can be met with 500 level or higher courses in chemistry, biochemistry, polymer sciences, materials sciences, biotechnological sciences and pharmacological sciences. Courses in other subject areas may be considered. However, prior approval is required. If you are in doubt as to whether a particular course will count toward the Chemistry Honors Program, please contact Dr. Alex Nevzorov.

**Curricula**

The B.A. program offers a flexible course of studies for students who do not necessarily plan to become professional chemists but who desire an interdisciplinary program with an emphasis on chemistry. The proper choice of electives will prepare the graduate for any of the following:

- medical, veterinary, or dental school
- work in chemical sales and management
- teaching in secondary schools
- work in environmental science
- graduate school in an allied science.
- This route is also an excellent premedical or predental program.

The B.S. curriculum, accredited by the American Chemical Society, includes a strong, broad background in mathematics, physics, and the liberal arts. The basic areas of organic, physical, inorganic, and analytical chemistry are stressed. Laboratory and classroom work develop the skills, knowledge, and inquiring spirit necessary for a successful career in chemistry. The advised elective credits allow individual diversity at the junior and senior levels. Many undergraduates participate in current departmental research through part-time employment or research projects. The B.S. curriculum prepares the student to enter the job market directly as a chemist or to enter various graduate schools in chemistry or an allied science.

Specific curriculum requirements are available on the Registration and Records website (http://www.ncsu.edu/registrar/curricula).

**Department of Marine, Earth and Atmospheric Sciences**

The Department of Marine, Earth and Atmospheric Sciences (MEAS) covers a broad range of disciplines with one overarching goal: a deeper understanding of the Earth’s environment. MEAS takes an interdisciplinary, integrated systems-based approach to studying our planet’s air, earth and water.

This interdisciplinary viewpoint is particularly important today, in light of accelerating global changes and increasing corporate and public interest in environmental health and the stewardship of our natural resources. Addressing these complex issues requires more than narrow training in a single discipline. MEAS graduates can be equipped for tasks as diverse as improving severe storm forecasting; assessing the potential effects of oil exploration and mining; modeling global climate trends or coastal flooding; understanding the transport of air pollutants from industrial centers, remote satellite observation of our planet’s surface; or devising plans to minimize erosion, harmful algal blooms and the pollution of our streams, lakes and estuaries.

MEAS offers degrees in meteorology, geology, marine sciences, and natural resources. Marine science majors learn how the oceans, solid earth, and atmosphere interact. Marine sciences courses are highly interdisciplinary and are available in chemical oceanography, physical oceanography, biological oceanography, coastal geology, and marine meteorology. Earth science courses encompass the entire earth, from the core, through the crust, to the minerals, sediments, ground water, and land forms of the surface. Tools learned allow students to understand and characterize the physical and historical earth. Course work in all areas of geology equips students to reduce potential disasters from geological hazards and to ameliorate the negative impact of human society on the geological resources of the earth. The meteorology program stresses a quantitative understanding of atmospheric structure and processes. It addresses problems such as air pollution, climate changes, and severe weather, such as thunderstorms, tornadoes, winter storms, and hurricanes. Forecasting and climate studies are enhanced by using real-time satellite imagery, radar-data products, and state-of-the-art computer technology. MEAS majors in natural resources fill a unique need in today’s society as experts who can interpret science for public policy shapers and decision makers. The training MEAS majors receive in economics, political science, policy issues, and management equips them to interact with industry and with regulatory and conservation agencies.

Planet Earth is MEAS’ natural laboratory. While most scientists conduct experiments under controlled conditions designed to replicate some facets of nature, we use ships, submarines, underwater gliders, aerial drones, satellites, and unattended monitoring instruments to directly and remotely probe the natural environment. Computer modeling helps us visualize real-world data and to design cutting edge experiments. Field study is an integral part of MEAS educational programs, enabling
students to apply concepts learned in the classroom to projects in the field. Summer field courses take students to the Southwest US or to the North Carolina coast for intensive training in field methods. Shorter field trips are part of classes in all disciplines.

Opportunities

MEAS undergraduate degree programs provide talented students with the foundation of scientific knowledge required for careers in government, industry, or academia. Many students pursue graduate degrees and pursue careers in industry, at government agencies and in academia.

Marine Sciences graduates go on to become oceanographers, to manage our coastal resources, model air-sea interaction, and explore global climate change. They conduct basic and applied research, serving as environmental consultants for industry and governmental agencies, policy and management experts for governmental agencies, and environmental science educators. Graduates with a Natural Resources degree are versed in the fundamental processes and interdisciplinary nature of the coastal zone. As scientists, managers, administrators, and regulators, they make decisions regarding use and conservation of coastal and marine resources.

Geology graduates address society’s needs for dealing effectively with earth processes, such as water resources and the stability of land forms. They work for engineering firms, permit-issuing agencies, and industries that rely on geological resources. Historical geologists are familiar with the evolution of earth through time and provide a perspective on potential long-term reactions of the earth systems to change. Those who concentrate in Environmental Geology are trained to assess and monitor geological resources such as ground water. Marine geologists are experts in the complex issues facing industry, municipalities, and residents in the dynamic and ecologically vulnerable coastal zone.

Meteorology graduates enjoy careers in weather forecasting, air quality assessment, development of weather products and services, broadcast communications, and advanced research. Marine meteorologists study ocean-generated weather systems. Their research is yielding practical benefits such as refined prediction of storm surge, which has streamlined evacuation efforts during severe storms along the Carolina coast. Meteorology graduates with an air quality emphasis work for environmental firms, regulatory agencies, and in applied research. Study of air quality and how air pollution is transported and dispersed is a rapidly expanding field in the atmospheric sciences.

MEAS graduates play a key service role for the State of North Carolina, assisting in everything from forecasting severe storms and analyzing the impact of atmospheric pollutants on agriculture and our estuaries, to determining the effects of toxic waste disposal on quality of surface and ground water.

Honors Program

Participants receive enhanced coverage of academic material and are involved in research. Eligibility is based on scholastic achievement. Minimum requirements for invitation are a GPA of 3.5 and success in some coursework in mathematics, chemistry, or physics. Students are reviewed for eligibility after the first semester of the sophomore year and again as first semester juniors. To successfully complete the honors program, a student will complete a minimum of 9 credit hours of special coursework and an independent research project, culminating in a written scientific report and a professional presentation. Students often choose one of the following presentation options:

1. Oral presentation in the department.
2. A poster presentation at the university's Undergraduate Research Symposium or equivalent professional conference.
3. Presentation at a professional meeting.

Special coursework includes 3 to 6 hours of independent study. The remaining credits are earned in honors sections of undergraduate courses and in advanced (graduate) courses. Students must graduate with a 3.4 grade point average overall.

Undergraduate Research, Cooperative Education, and Internships

Students who attend a research-intensive ("Research I") university benefit from the opportunity to engage in research as undergraduates and to study with professors whose involvement in research keeps their knowledge and enthusiasm fresh. The faculty members in MEAS are internationally recognized research scientists. Examples of past undergraduate research projects include studies of coral reef fish in the Bahamas to understand age, growth, and life history transitions; assessment of Lake Victoria’s impact on the climate of East Africa; examination of the relationship between atmospheric ozone and meteorological parameters as measured with instrumented balloons; experiments on generation of oxygen from moon rocks to supplement a manned moon station; and reconstruction of events during past volcanic eruptions on Hawaii. Outstanding MEAS students can receive career training with pay through the NC State Cooperative Education program, after completing the first year of undergraduate studies. Co-op and internship students have completed assignments with the National Weather Service, US Geological Survey, US Air Force, US Environmental Protection Agency, NC Museum of Natural Sciences, NC State Climate Office, NC Division of Marine Fisheries, NASA, local environmental consulting firms, and other state and federal agencies. Many students co-op or intern at the internationally renowned Research Triangle Park. After graduation, co-op students often are hired full-time by the same companies or agencies.

Facilities

The home base of MEAS is Jordan Hall, an award-winning structure, that houses the department's classrooms, teaching laboratories, computing facilities, research laboratories and offices of faculty and staff. Jordan Hall has several computing laboratories, including the Weather Analysis and Forecasting Laboratory. This laboratory houses 50 workstations providing access to real-time and archived satellite, radar, surface, and upper-air observations plus a wide variety of numerical model fields. From the rooftop Weather Observatory, detailed weather measurements are automatically logged and archived and weather balloons are launched. The State Climate Office is housed in the Research III building on NC State’s Centennial Campus, where many students gain skills in instrumentation, data acquisition, data analysis, and interaction with the public. NC State’s Center for Marine Sciences and Technology (CMAST) on the shore of Bogue Sound, in Morehead City provides classrooms and research laboratories in a coastal setting. The department maintains an extensive inventory of both laboratory and field research equipment. Specialized equipment in the department supports teaching and research in:

Aerosol Physics and Meteorology: Differential Mobility Analyzers (DMA), Condensation Particle Counter (CPC), Humidified Tandem Differential Mobility Analyzer (HTDMA), Sodar System.


Geochemistry: Elemental analyzer, Total organic carbon analyzer, Isotope ratio mass spectrometer, UV-vis spectrophotometer, Fluorometer, Fluorescence plate-reader, and Microelectrode oxygen system.

Geophysics: Magnetometer, 24-channel seismic geophone array & 40 kg accelerated weight drop source, 24-channel direct current resistivity meter, Multi-frequency electromagnetic-induction unit, Ground-penetrating radars with 100, 250, 500 MHz antennas, High-resolution sub-bottom profiler, Terrestrial laser scanner, and Differential GPS receivers.


Curricula
The department offers curricula in each of the areas of marine, earth and atmospheric sciences. Each prepares students for employment at graduation or for further professional training. There is one Bachelor of Science (B.S.) curricula in atmospheric sciences: Meteorology. Students in that major can choose to concentrate in Marine Meteorology. Earth sciences house one curricula: the B.S. in Geology. In the marine sciences, students can choose between two degree programs: the B.S. in Marine Science or the B.S. in Natural Resources. Students in the marine science major choose one of five concentrations:

1. Biological Oceanography
2. Chemistry
3. Geology
4. Meteorology
5. Physics

Students in the B.S. in Natural Resources concentrate in Marine and Coastal Resources.

Specific curriculum requirements are available on the Registration and Records website (https://registrar.ncsu.edu).

Minor in Geology
The Department of Marine, Earth and Atmospheric Sciences offers a Minor in Geology to majors in any field except geology. This program provides a means of recognition for students in any field who have a curiosity about the materials, structures and processes of the solid earth.

Requirements
At least 15 hours of geologic coursework which must include:
- A gateway course (MEA 100, MEA 101, MEA 120, MEA 140, MEA 150, or MEA 200)
- MEA 110
- MEA 202
- MEA 211
- A grade of "C" or better in all course work used toward minor.

Program Administrator and Contact:
Dr. Karl Wegmann
Department of Marine, Earth and Atmospheric Sciences
2123 Jordan Hall, Box 8208
919.515.0380
kwegman@ncsu.edu

Minor in Meteorology
The Department of Marine, Earth, and Atmospheric Sciences offers a Minor in Meteorology to majors in any field except meteorology. Admission to the program requires a grade of C- or better in the following courses:

- MA 141
- MA 241
- MA 242
- PY 205
- PY 208

Successful completion of the program requires a grade of C- or better in the following courses:

- MEA 213 (MEA 130 may be substituted)
- MEA 214
- MEA 312
- MEA 421

Program Administrator and Contact:
Dr. Matthew Parker
Department of Marine, Earth and Atmospheric Sciences
5149 Jordan Hall, Box 8208
Phone: (919) 513-4367
mdparker@ncsu.edu

Department of Mathematics
The department offers Bachelor of Science degrees in Mathematics and in Applied Mathematics with an optional concentration in Financial Mathematics. These programs provide a core of basic mathematics courses along with flexible choices of electives, which permit both a well-rounded education and preparation for math-related careers. Students may focus their studies in financial mathematics, mathematical biology, mathematical physics, mathematical statistics, or computational mathematics. Employment objectives can be focused on quantitative careers in business or government, teaching at the secondary level, or graduate study in mathematics and/or related areas.

Specific curriculum requirements are available on the Registration and Records website (https://www.acs.ncsu.edu/php/coursecat/degree_requirements.php#requirement-courses-list).

Academic Enrichments
Many undergraduates in the Mathematics Department participate in research programs with members of our faculty presenting their results in both regional and national meetings. The research projects come from many areas of pure and applied mathematics including chaos theory, the path-space of various surfaces, numerical methods for solid mechanics, and math modeling in the life-sciences, such as orthopedic soft tissues and blood flow in the brain. Other enrichment activities include special topics courses, such as The Mathematics of Ranking and Clustering,
and programs away from campus, such as the NSF sponsored Research Experience for Undergraduates, the Budapest Semester in Mathematics, and the Society for Undergraduate Mathematics, a Student Chapter of the Mathematical Association of America, opened to all students interested in Mathematics.

Talented students are encouraged to consider a 5-year Accelerated Bachelors/Masters Program (ABM). A key feature of the program is counting up to 12 hours of graduate courses to both the BS and MS degrees. Students can choose between the MS in Mathematics, Applied Mathematics, or Financial Mathematics.

**Honors Program**

Students who demonstrate high aptitude in mathematics are invited to participate in the Mathematics Honors Program. The program provides intensive mentoring and preparation for graduate study. Students are invited to join the program if they are recommended by a teacher in an upper-level math course and have a math GPA of 3.5 or higher. To complete the program, students must take MA 426 Mathematical Analysis II, at least three graduate level math courses, and do a research project. Math Honors students often study abroad at programs such as the Budapest Semesters in Mathematics or Math in Moscow and participate in funded summer research at other universities.

**Awards**

The department recognizes its superior students with the following annual awards:

- Hubert V. and Mary Alice Park Scholarship, for an outstanding rising junior or senior in mathematics.
- John W. Cell Scholarship, for an outstanding rising junior or senior in mathematics;
- Carey Mumford Scholarship, for an outstanding sophomore, junior, or senior in mathematics.
- Levine-Anderson Award, for the student who has the best performance in the William Lowell Putnam Examination (not restricted to math majors).
- Charles N. Anderson Scholarship, for an outstanding sophomore in mathematics.
- Charles F. Lewis Scholarship, for an outstanding senior who is a double major in mathematics/mathematics education.
- Mrs. Roberts C. Bullock Scholarship, for an outstanding mathematics major with a demonstrated interest in the English language.
- Dr. Rebecca R. Bullock Memorial Scholarship Endowment, for an outstanding mathematics major with a demonstrated interest in the English language.
- Howard A. Petrea Scholarship, for an outstanding junior or senior in mathematics.
- H. Thomas and Sue Banks Scholarship, for an outstanding undergraduate pursuing degrees in one of the departments of the college, with preference for math majors.
- Gordon Family Scholarship, for an outstanding undergraduate majoring in mathematics. Recipients must agree to volunteer one hour a week as a math tutor at the SAS Learning Center at Kentwood.
- Marvin and Mary Chaney Scholarship, for an outstanding undergraduate majoring in mathematics.
- Dr. Daniel Teague and Dr. Jo-Ann Cohen Scholarship, for an outstanding undergraduate in mathematics with an interest in K-12 mathematics education.
- Fulton and Ruby H. Starling Scholarship, for an outstanding undergraduate pursuing degrees in one of the departments of the college, with preference to a student from Robeson County and with preference for math majors.
- James W. Mauney Scholarship, for an outstanding undergraduate majoring in mathematics.

The department also has a chapter of the National Mathematical Honorary Fraternity Pi Mu Epsilon. Membership is open to those students with superior performance in mathematics courses.

**Minor in Mathematics**

The minor program consists of the successful completion with a grade of C- or better of any 15 hours selected from the Department of Mathematics’ list of approved courses. The list includes MA 225 Foundations of Advanced Mathematics as well as any MA courses at the 300, 400, and 500 levels.

**Department of Physics**

Physics is the fundamental science of observation, measurement and description of the natural world. Physicists seek to establish a mathematical description of all physical phenomena, ranging from the interactions of quarks in nuclei to the collisions of galaxies in the universe. Together with scientists in engineering and other physical, biological, and mathematical sciences, physicists collaborate to develop new materials and new insights in all areas of modern science and technology.

**Curricula**

The Physics undergraduate curricula provide a strong background in the fundamentals, and offer course options for deeper studies in areas of interest. Undergraduates have the opportunity to work in research laboratories with faculty in: astrophysics, atomic physics, biological physics, physics education, nuclear and particle physics, synchrotron radiation, near-field optics, and materials physics, solid-state and condensed-matter physics. Undergraduates are frequently co-authors on scientific papers. Physics majors are part of a close-knit community- a small highly motivated group of people who have wide-ranging interests and a passion for solving problems.


**Bachelor of Science in Physics**

This degree equips students with a broad technical background, providing a solid basis for graduate study in physics or related sciences, enrollment in professional schools such as law or medicine, and employment in government or industrial laboratories.

**Bachelor of Arts in Physics**

This degree offers a flexible course of study for students who may not plan to become professional physicists but who desire an interdisciplinary
program with a strong emphasis on physics. The proper choice of electives will help to prepare the graduate for professional careers in education, law, business, journalism, or graduate school in an allied science. It is especially suitable as part of a double major or as preparation for high-school teaching.

Honors Programs

The Department of Physics Honors Program offers students the opportunity to develop their academic potential by increased involvement and participation in physics study and research. To graduate with physics honors, students must complete three (3) hours of PY 499 Independent Research in Physics and submit a written scientific report based on their results. Students must also complete an additional nine (9) hours of 500-level physics courses. One 400 level physics course (excluding PY 407) taken with the honors contract may be substituted for a 500 level course.

Minor in Physics

The Department of Physics offers a minor in physics to majors in any field except physics. To complete the minor, the following physics courses are required:

Course List

PY201 or PY 205 - Mechanics
PY 202 or PY 208 - Electricity and Magnetism
PY 203 or PY 407 - Modern Physics

Choose two of the following:

PY 301 - Introduction to Quantum Mechanics
PY 328 - Stellar and Galactic Astrophysics
PY 341 - Spacetime Physics
PY 401 - Quantum Physics I
PY 402 - Quantum Physics II
PY 411 - Mechanics I
PY 412 - Mechanics II
PY 413 - Thermal Physics
PY 414 - Electromagnetism I
PY 415 - Electromagnetism II

Department of Statistics

Statistics is the body of scientific methodology that deals with the logic of experiment and survey design, the efficient collection and presentation of quantitative information, and the formulation of valid and reliable inferences from sample data. The Department of Statistics provides instruction, consultation, and computational services on research projects for other departments of all colleges at North Carolina State University including the Agricultural Research Service. Department staff are engaged in research in statistical theory and methodology. This range of activities furnishes a professional environment for training students in the use of statistical procedures in the physical, biological and social sciences and in industrial research and development.

Opportunities

The importance of sound statistical thinking in the design and analysis of quantitative studies is reflected in the abundance of job opportunities for statisticians. Industry relies on statistical methods to control the quality of goods in the process of manufacturing and to determine the acceptability of goods produced. Statistical procedures based on scientific sampling have become basic tools in such diverse fields as weather forecasting, environmental monitoring, opinion polling, crop and livestock estimation, market research, and business trends prediction. The development and testing of new drugs and therapies requires statistical expertise, and advances in genomic science provide tremendous opportunities for statistical work. Because one can improve the efficiency and use of increasingly complex and expensive experiment and survey data, the statistician is in demand wherever quantitative studies are conducted.

Scholarships and Awards

The Department of Statistics recognizes the importance of superior academic performance through the awarding of scholarships and certificates of merit. Scholarships are available for the freshman year for the purpose of attracting academically superior students. There are four named departmental scholarships: John L. Wasik Freshman Scholarship, Francis E. McVay Scholarships, Dr. Jackson A. and Viola H. Rigney Scholarship and SAS Institute Scholarships. The North Carolina State University chapter of Mu Sigma Rho, the national statistics honorary fraternity, accepts as members students who have had superior performance in statistics courses. Each year the department recognizes exceptional seniors with awards in the areas of community engagement, academic achievement, and research.

Honors Program

The Department of Statistics allows exceptional undergraduate students to design a program of study that typically includes advanced courses not ordinarily taken by statistics majors and one or two semesters of independent study or research. Students in the program complete a minimum of 9 credit hours in courses drawn from at least two of the following three categories: MA 426, or other courses designated as appropriate by the honors adviser, 500-level courses in statistics or mathematics, and 400- or 500-level courses in independent study. Interested students should contact the Honors Adviser in the statistics department for additional information.

Curricula

The undergraduate curriculum provides basic training for a career in statistics or for graduate study and leads to the Bachelor of Science in Statistics. In addition to statistics, the curriculum includes study in mathematics, computer science, and the biological/physical sciences. While fulfilling their major elective requirements, students can either elect a minor or distribute their study across disciplines exploring the application of statistics in other fields such as agriculture and life sciences, computer science, economics and business, industrial engineering, and the social sciences. A cooperative work-study option is also available.

Specific curriculum requirements are available on the Registration and Records website (http://www.ncsu.edu/registrar/curricula).
Minor in Statistics

The Department of Statistics offers a minor in statistics to majors in any field except statistics. The importance of statistical reasoning to solve real-world problems has been recognized by the business, government, and scientific communities. This minor program will provide students with an opportunity to become competent in the use of statistical methods to summarize information and/or provide answers to policy/research questions. Students completing this program of study will also be provided with experience in statistical computing. Please see the Director of Undergraduate Programs.

Please refer to https://oucc.dasa.ncsu.edu/statistics-17stm/ for information about a minor in statistics.

College of Veterinary Medicine

College of Veterinary Medicine
1060 William Moore Drive
NC State Box 8401
Raleigh, NC 27607
Phone: (919) 513-6500
Student Services Phone: (919) 513-6262
Student Services Fax: (919) 513-6197
E-mail: cvm_dvm@ncsu.edu

Ranked third in the nation among colleges of veterinary medicine by U.S. News & World Report, NC State’s College of Veterinary Medicine is a driving force in veterinary innovation. From our leadership in understanding and defining the interconnections between animal and human health, to groundbreaking research in areas like equine health, and our commitment to training the next generation of veterinary health professionals, we are dedicated to advancing animal and human health from the cellular level through entire ecosystems.

No specific undergraduate degree track is associated with a pre-professional veterinary medicine program. Faculty members from the College of Agriculture and Life Sciences and the College of Sciences serve as advisers to undergraduate students interested in veterinary medicine that are enrolled and pursuing a baccalaureate program usually in a science-related field. Pre-professional course requirements are listed at: https://cvm.ncsu.edu/education/dvm/admission/. After completion of the required courses, students may be eligible to apply for the professional veterinary program. Course requirements may be changed annually and are determined by the Faculty Committee on Admissions in the College of Veterinary Medicine.

All courses listed at: https://cvm.ncsu.edu/education/dvm/admission/eligibility/ should be completed by the time of application to the College of Veterinary Medicine, except for two courses which may be pending completion in the spring semester, term, or quarter, of the year of application.

Department of Clinical Sciences

The Department of Clinical Sciences is dedicated to excellence in educating and training veterinarians and comparative biomedical scientists, furthering health care and wellness through discovery and clinical research, providing outstanding and compassionate medical care to a diverse range of animal patients, effectively engaging animal-owning public, government and industry partners, and providing leadership in integrating biomedical sciences to advance One Health.

Curricula and programs in Clinical Sciences are only available at the graduate level. Please visit the Clinical Sciences website (http:// www.cvm.ncsu.edu/docs) for more information.

Department of Molecular Biomedical Sciences

The mission of the Department of Molecular Biomedical Sciences is to provide outstanding instruction and mentoring in the professional veterinary curriculum and graduate programs, and to conduct basic and clinical biomedical research. A wide-range of research efforts are conducted within the Department that span the whole-animal, tissue, cellular, and molecular levels. The Department fosters and encourages interdisciplinary approaches to solving biomedical problems, and seeks collaborations with public- and private-sector research institutions in the Research Triangle and beyond.

Curricula and programs in the Department of Molecular Biomedical Sciences are only available at the graduate level. Please visit the MBS website (http://www.cvm.ncsu.edu/mbs/about.html) for more information.

Department of Population Health and Pathobiology

The mission of the Department of Population Health and Pathobiology is to recruit, train, inspire, and graduate Doctors of Veterinary Medicine of exemplary knowledge, skill, and character. In order to maintain the intellectual and professional climate necessary to accomplish this mission, the department’s faculty will advance veterinary medical science through innovative basic and applied research, inspired mentoring of students (undergraduate, professional, residents, and graduate), excellence in clinical and diagnostic services, and innovative extension and engagement activities.

Curricula and programs in the Department of Population Health and Pathobiology are only available at the graduate level. Please visit the PHP website (http://www.cvm.ncsu.edu/dphp) for more information.

Academic Programs and Services

University College
300 Park Shops
NC State Box 7105
Raleigh, NC 27695-7105
Website: https://dasa.ncsu.edu/academic-success/
Phone: 919-515-3037 Fax: 919-515-4416

Michael D. Mullen, Vice Chancellor and Dean

At NC State, student success is our priority. We challenge students to think bigger, to find innovative solutions for real-world problems. Our rigorous coursework and on-campus resources provide students with the tools they need to excel. The University College (http:// universitycollege.dasa.ncsu.edu) was designed to bring all of the academic services in the Division of Academic and Student Affairs into one centralized entity.

Academic Advising Services (AAS)
2751 Cates Avenue
FYC Commons
Academic Advising Services (AAS) offers face-to-face, telephone, virtual, and email academic advising to NC State University degree seeking students who are exploring a change of major or needing advising assistance as they transition to a new major. Cross-curricular academic advisors rotate through a daily walk-in schedule. AAS advisors provide current information on general education, declaring majors and/or minors, and academic policies. Students who need long-term advising assistance may request to transfer into AAS (undesignated status) and be assigned to an AAS advisor. AAS offers a Career Exploration and Development course for students who need a structured major exploration experience. AAS also maintains an extensive and up-to-date advising FAQ database on the AAS webpage, a great resource for all students and advisors.

Academic Support Program for Student Athletes (https://aspsa.dasa.ncsu.edu)

200 Case Academic Center
240 Jeter Drive
Campus Box 7104
Raleigh, NC 27695-7104
Phone: 919-515-2464 Fax: 919-515-1619
Website: https://aspsa.dasa.ncsu.edu/about/

Katie Graham, Assistant Dean

Academic Advising Services (AAS) offers face-to-face, telephone, virtual, and email academic advising to NC State University degree seeking students who are exploring a change of major or needing advising assistance as they transition to a new major. Cross-curricular academic advisors rotate through a daily walk-in schedule. AAS advisors provide current information on general education, declaring majors and/or minors, and academic policies. Students who need long-term advising assistance may request to transfer into AAS (undesignated status) and be assigned to an AAS advisor. AAS offers a Career Exploration and Development course for students who need a structured major exploration experience. AAS also maintains an extensive and up-to-date advising FAQ database on the AAS webpage, a great resource for all students and advisors.

Academic Support Program for Student Athletes (https://aspsa.dasa.ncsu.edu)

200 Case Academic Center
240 Jeter Drive
Campus Box 7104
Raleigh, NC 27695-7104
Phone: 919-515-2464 Fax: 919-515-1619
Website: https://aspsa.dasa.ncsu.edu/about/

Katie Graham, Assistant Dean

The Office of Academic Support Program for Student Athletes (ASPSA) is a comprehensive support program that strives to meet the academic, personal and professional development needs of all student-athletes, promoting excellence and effectiveness in undergraduate and graduate education as well as leadership and civic engagement.

ASPSA is committed to extending the educational experience of its constituency with particular emphasis on empowering student-athletes to become strong self advocates, providing specialized initiatives to facilitate a smooth transition from high school to college and from college to professional life while successfully integrating student-athletes into the campus community; enhancing academic skills for student-athletes at all skill levels and providing academic support personalized to the needs of each student-athlete.

ASPSA will maintain a strong sense of integrity and will continue to strive to be one of the benchmark programs for academic support for all collegiate academic support programs in the nation.

The mission of the Office of Academic Support Program for Student Athletes at NC State University is:

1. to support the recruitment, retention and graduation of NC State student-athletes;
2. to provide a comprehensive support system that affords NC State student-athletes equitable opportunity to pursue academic, personal, and professional development and
3. to strongly adhere to the principles of integrity, excellence, and lifelong learning.

Summer START (https://summerstart.dasa.ncsu.edu)

204 Park Shops
NC State Box 7105
Raleigh, NC 27695-7105
Phone: 919-513-1883

Ginny Shepherd, Summer START Coordinator

Summer START is designed to assist new incoming students with the transition to NC State University through five weeks of academic courses and campus involvement. This program provides a strong introduction to the culture of NC State and to the city of Raleigh. Summer START is a small but diverse living and learning experience with students represented from 8 different countries, 11 different states and all 10 undergraduate colleges at NC State. Summer START works closely with each college to ensure students will be enrolled in academic courses towards their specific curriculum to get them on the accelerated path to graduation. In addition to up to eight credit hours of university coursework, many optional academic, recreational, service, leadership and involvement opportunities are planned throughout the week and weekends to help students acclimate to NC State’s campus. Co-curricular, college based, leadership, and service programs are planned throughout the week and on the weekends.

College Advising Corps (CAC) (http://advisingcorps.dasa.ncsu.edu)

211 Park Shops, NC State Box 7105
Raleigh, NC 27695-7105
Phone: 919-515-5247 Fax: 919-515-4416

Patti Baynes, Program Manager

In 2014, the College Advising Corps launched a partnership with the John M. Belk Endowment to expand to partner institutions in North Carolina. With over 685,000 rural students, North Carolina has one of the highest concentrations of rural students in the nation. With significant need to increase college access for high school students in rural North Carolina and the substantial impact the Advising Corps had already demonstrated in rural North Carolina, the partnership with the Belk Endowment allowed the Advising Corps to partner with four of North Carolina’s top Higher Education institutions.

"The NC State College Advising Corp is extending educational opportunities to all students."

The NC State College Advising Corps was launched the summer of 2014, starting with nine advisors serving nine high schools. The program, with 21 advisors, now serves over 14,000 students in 21 high schools, spanning across 10 different rural counties in North Carolina. As recent graduates of NC State, the advisors are placed in under-served, rural high schools to assist students who may not have seen college as a possibility. They are often the key resources for students to persist in their education beyond high school and become mentors within the school setting. Further, the NC State College Advisors serves as a role model for service and an expressive voice of the importance of an educated workforce.

Disability Services Office (DSO)

2221 Student Health Center
NC State Box 7509
Raleigh, NC 27695-7509
Website: http://dso.dasa.ncsu.edu
Exploratory Studies

2751 Cates Avenue
University College Commons
NC State Box 7925
Raleigh, NC 27695
Website: https://exploratorystudies.dasa.ncsu.edu
Phone: 919-515-8130 Fax: 919-515-8267
Kim Outing, Director
Carrie McLean, Assistant Dean and Executive Director of Advising

Exploratory Studies provides a comprehensive first year experience for students who want to learn about NC State’s many academic programs, choose the right major, and graduate on time. Established in 1995 as the First Year College, the program has developed a nationally-recognized model for successfully working with exploratory students. The key components of the program include personal, one-on-one academic and career advising, a two-semester orientation course and the Exploratory Studies Village.

The Disability Services Office (DSO) collaborates with students to determine reasonable accommodations to ensure equal opportunity. The DSO works with departments throughout the University to assure that the programs and facilities are accessible to every student at NC State.

NC State is committed to providing all students with equal access to educational programs, services and activities. Students who have, or think they may have, a disability (e.g. mental health, attentional, learning, vision, hearing, physical or systemic) are invited to contact the DSO (http://dso.dasa.ncsu.edu/contact-us) to arrange a confidential discussion at 919-515-7653 or disability@ncsu.edu.

EcoVillage (https://dasa.ncsu.edu/tag/ecovillage)
116A Bragaw Residence Hall
NC State Box 7105
Raleigh, NC 27695-7105
Website: https://dasa.ncsu.edu/tag/ecovillage/
Phone 919-515-4046 Fax: 919-515-4416
Meghan Lob sing er, Director

The EcoVillage, located in Bragaw Hall welcomes students from all majors, thereby creating an interdisciplinary education experience that prepares students for life-long sustainable living! Students go beyond the classroom to lead, serve, create, problem-solve and engage in complex issues facing the local and global energy and environmental challenges of society to advance sustainability.

The EcoVillage focuses on uniting students around the central goal of sustainable living and awareness. The EcoVillage broadly defines sustainability to include everything from agriculture and energy consumption, to transportation and recycling.

The EcoVillage provides unique experience allowing students to face the energy and environmental challenges of society. Beyond the classroom, members of the EcoVillage engage with faculty, facilities staff and sustainability staff to explore local, regional and global approaches to advance sustainability.

Fellowship Advising Office (https://fellowships.dasa.ncsu.edu)
204 Clark Hall
NC State Box 8610
Raleigh, NC 27695-8610
Phone: 919-515-2237 Fax: 919-513-439
Website: https://fellowships.dasa.ncsu.edu/
Tiffany Kershner - Coordinator

The Fellowship Advising Office (FAO) provides a variety of services to NC State students and alumni. Some of these services include:

• Providing information on fellowship opportunities and application procedures
• Reviewing and critiquing application essays and statements
• Providing institutional endorsements for applicants who receive the campus nomination (for those fellowships that require nominations)
• Submitting application materials on behalf of applicants
• Staging mock interviews for applicants selected for regional interviews

The FAO Advisor works with students interested in applying for these and many other prestigious national fellowships. We encourage you to search our website for fellowship opportunities. Once you have identified fellowships that interest you, please make an appointment to discuss these opportunities with the Fellowship Advisor.

First Year Inquiry Program (http://www.ncsu.edu/firstyearinquiry) (FYI)
300 Park Shops
NC State Box 7105
Raleigh, NC 27695-7105
Website: (http://ncsu.edu/firstyearinquiry) (http://www.ncsu.edu/firstyearinquiry)https://fyi.dasa.ncsu.edu/
Phone: 919-515-3037 Fax: 919-515-4416
Barbara Kirby, Associate Vice Provost

The First Year Inquiry Program (FYI) is designed specifically for first year students who take general education courses during their first year at NC State. Each FYI course, which is designated with the “Q” suffix, fulfills a general education program (GEP) requirement. FYI faculty, for whom teaching and student success are priorities, engage FYI students through the use of “inquiry-guided” teaching methods. The three student-learning objectives to which the FYI program strives are sharpening of critical and creative thinking skills, enhancing development of intellectual maturity and fostering of habits of creativity and inquiry.
and increasing student responsibility for his or her own learning. Students further benefit from experiencing classes with a small faculty/student ratio that fosters a closer relationship among students and professor.

**Global Perspectives Certificate (GPC)** (http://GPC.dasa.ncsu.edu)

300 Park Shops
NC State Box 7105
Raleigh, NC 27695-7105
Website: http://GPC.dasa.ncsu.edu/
Phone: 919-515-3037 Fax: 919-515-4416

Barbara Kirby, Associate Vice Provost

As society, political systems, and economies become interrelated global systems, the need for global awareness is increasingly important.

Students, regardless of academic and social background, need international awareness and experience to be successful members in our global society. Many businesses, graduate schools, and organizations give priority to applicants who have significant international and foreign language experience. Knowledge of global cultures is also personally fulfilling, giving way to new perspectives, international contacts, and even lifelong friends. The goal of the Global Perspectives Certificate is to:

- recognize students for their international studies and activities and
- encourage students to continue their global interests both overseas and within the United States.

All undergraduate degree-seeking students and all majors are welcome, including undergraduate international students. Upon completion, students will receive an official certificate and a notation on their transcript documenting their global experiences during their studies. Learn more about the GPC and get started today.

**Health and Exercise Studies (HES)**

2000 Carmichael Gymnasium
NC State Box 8111
Raleigh, NC 27695-8111
Phone: 919-513-3885 Fax: 919-515-2981
Website: https://hes.dasa.ncsu.edu/

Tommy Holden, Department Head and Teaching Professor

All North Carolina State University students are required to complete two credit hours of Health and Exercise Studies (HES) activity courses to meet the University General Education Program (GEP). Students must take at least one credit hour of a 100-level Health and Exercise Studies course. 100-level activity courses focus on fitness and wellness and can be found with the HESF prefix. The second credit hour required to fulfill the GEP can be an additional 100-level Health and Exercise Studies activity course or a 200-level activity course, which focuses on skill-acquisition. Students may choose a class that offers a familiar skill, or may opt to experience a new activity. Students with disabiling conditions will be assisted by the department of Health and Exercise Studies, Student Health Service, and the Disability Services Office to help choose appropriate classes. Only “activity” courses, not elective “lecture” courses, may be used to satisfy the NC State GEP HES requirement. Students have the option of taking HES courses on an S/U basis. For more information, please visit Health ad Exercise Studies website.

**Music Department**

Price Music Center

2620 Cates Ave
Raleigh, NC 27695
Phone: 919-515-2981 – Main Office
Phone: 919-515-4204
Fax: 919-515-1089

Broughton Hall
2601 Katharine Stinson Dr.
Campus Box 7311
Raleigh, NC 27695
Phone: 919-515-1064 – Main Office
Fax: 919-515-1089
Website: https://music.dasa.ncsu.edu/

Daniel Monek, Department Head

The Music Department provides educational and performance opportunities for student and community participants through a variety of musical experiences and academic courses. The department also serves as a cultural resource for the University and the greater community through performances and presentations offered by our students, our student/community groups, and by our faculty.

The Music Department provides a responsive and innovative music education to all NC State students as an essential expression of the human experience.

**New Student Programs (NSP)** (https://newstudents.dasa.ncsu.edu)

106 Peele Hall
NC State Box 7105
Raleigh, NC 27695-7105
Phone: 919-515-1234
Website: https://newstudents.dasa.ncsu.edu/

Michael Coombes, Director

Our Mission: New Student Programs addresses the holistic needs of each new NC State student to create a foundation of success.

Based on the core value that people matter, we achieve this through:

- Cultivating strategic partnerships across the University
- Promoting an environment of personal responsibility
- Fostering inclusivity through a shared campus identity
- Partnering with parents and families
- Preparing and empowering student leaders to serve the campus
- Striving to be innovative in meeting the needs of our community

Our Outcomes: By participating in our programs, students should achieve the outcomes identified below.

- Objective 1: Academic Success
  - Outcome 1a: Identify skills, university and college resources, and policies that promote academic success and engagement in co-curricular learning experiences
- Objective 2: Connection to Campus
  - Outcome 2a: Develop a sense of community with fellow students, faculty and staff by engaging in shared experiences
  - Outcome 2b: Recognize the value of different experiences of individuals within the campus community
- Objective 3: Community Expectations
  - Outcome 3a: Examine the role of personal responsibility as it applies to the university’s academic and behavioral expectations and policies
Outcomes 3b: Identify behaviors and resources that promote personal and community well-being and safety

- Objective 4: Transition to the University Environment

Outcome 4a: Demonstrate the ability to navigate the day-to-day functions of collegiate life by utilizing the available resources

- Objective 5: Student Leader Development

Outcome 5a: Apply effective leadership skills in interactions with students, families. New Student Programs staff, and campus partners

Outcome 5b: Utilize knowledge of campus to address the transitional needs of new students and families

ROTC - Department of Aerospace Studies - Air Force (https://airforce.dasa.ncsu.edu)
3223 Broughton Hall
NC State Box 7308
Raleigh, NC 27695-7308
Phone: 919-515-2417
Fax: 919-515-4456
Website: https://airforce.dasa.ncsu.edu/

Lieutenant Colonel Jeffrey Onan
Commander and Department Chair

Our faculty of professors are active duty officers from diverse professional backgrounds that enrich the learning environment.

The AFROTC program at NC State University is geared toward students who desire to earn a commission as a Second Lieutenant in the U.S. Air Force. However, any NC State student or one of our four crosstown colleges who wish to learn about the U.S. Air Force (USAF) can take any Air Force ROTC course with no obligation or commitment. All students who complete the Aerospace Studies academic program of study with a minimum of 15 hours in aerospace studies are eligible to receive a Aerospace Studies minor.

The four-year AFROTC program that leads to a commission as a U.S. Air Force Officer allows freshmen to enroll in Aerospace Studies courses in the same manner as other college courses for the first two years. It is during this time a student may join the program and become an Air Force ROTC cadet. All cadets must be attending college in “full time” status. Aerospace Studies courses are taken as free electives and cadets incur no military obligation unless they are receiving an AFROTC scholarship. The first two years in the AFROTC program are called the General Military Course (GMC) during which cadets learn the basics of military discipline, followership, and begin preparation for field training. The last two years of AFROTC comprise the Professional Officer Course (POC) where cadets lead each other through a time-tested leadership laboratory training environment that instills both character and leadership skills needed in preparation for life as an active duty officer. The pinnacle training event for AFROTC occurs in the summer between the sophomore (AS200) and junior (AS300) year when a cadet attends intense field training held at Maxwell AFB, Alabama and Camp Shelby, Mississippi.

For exceptionally qualified cadets, the four-year program can be compressed to as little as two and one half years for those who do not complete all four AS100 and AS 200-level courses (AS 121 The Foundation of the United States Air Force I and AS 221 The Evolution of USAF Air and Space Power I are offered in the fall semester, AS 122 The Foundations of the United States Air Force II and AS 222 The Evolution of USAF Air and Space Power II are offered in the spring semester) while enrolled in the Air Force ROTC program. Interested students must contact the Professor of Aerospace Studies to determine eligibility requirements.

Cadets at every level have numerous opportunities to further their knowledge of the Air Force and develop leadership. Throughout the school year, cadets have opportunities to examine all aspects of life in the Air Force and gain leadership experience through Air Force base visits, flying opportunities, and social activities. Additionally, a variety of summer programs allow cadets to visit bases and participate in programs such as the US Air Force Academy Free Fall program, manned glider training, and worldwide cultural immersion programs. POC cadets have similar opportunities, with focus on programs related to the cadet’s desired active duty career area, both in the U.S. and abroad.

Upon university graduation and satisfactory completion of the Air Force ROTC program, a cadet is commissioned a second lieutenant in the USAF and is obligated to serve a minimum of four years on active duty. View the NC State Air Force ROTC website (https://airforce.dasa.ncsu.edu).

ROTC - Department of Military Science - Army (https://army.dasa.ncsu.edu)
1216 Broughton Hall
NC State Box 7309
Raleigh, NC 27695-7309
Phone: 919-513-0189
Fax: 919-515-2070
Website: https://army.dasa.ncsu.edu/

MAJ Timothy Hudson

The mission of the Army ROTC Program is to train college men and women to become commissioned officers in sufficient numbers to meet Active Army, Army Reserve, and National Guard requirements. The Army ROTC Program consists of a voluntary Basic Course (freshmen and sophomore level) and a two-year Advanced Course (junior and senior level) that includes a four-week Cadet Leaders Course in the summer prior to the senior year. One may enter the Advanced Course with participating in the Basic Course by any of the following methods:

Simultaneous Membership Program (SMP): Members of the Reserve or National Guard units may take advantage of this program and, if accepted, enroll directly into the Advanced Course. SMP participants will be assigned to a unit near NC State or home for part-time monthly officer training and will receive the ROTC Advanced Course subsistence payment of $450 per month for juniors and $500 per month for seniors, plus approximately $200 per month for the one weekend of Reserve or Guard training. In addition, two weeks of Annual Training will be required for which the individual will receive full pay; Prior Service:

Service veterans are eligible for placement into the Advanced Course; Leader’s Training Course (LTC): Successful completion of the four-week basic summer camp, held at Ft. Knox, Kentucky is an alternative to the Basic Course. Students with strong academic credentials may receive a scholarship after completing this course; Transfer Credit: Students entering as transfer students from other institutions may receive credit for work completed at other Senior ROTC units; Junior ROTC: Students who participated in a Junior ROTC in high school may receive placement credit as determined by the Professor of Military Science.

All full-time freshmen and sophomores may enroll in any Military Science Basic Course offering without obligation to the Army. To be eligible for participation in the Advanced Course, applicants must be in good academic standing and demonstrate satisfactory performance in the Basic Course. Additionally, applicants for commissioning must be able to
be commissioned by their 30th birthday. An age waiver may be obtained as long as the individual will be commissioned prior to his/her 32nd birthday. A student must have a minimum of two years remaining as a full-time student at either the undergraduate or graduate level.

**ROTC - Department of Naval Sciences - Navy**

4174 Broughton Hall  
NC State Box #7310  
Raleigh, NC 27695-7310  
Phone: 919-515-2757  
Fax: 919-515-6215  
Website: https://naval.dasa.ncsu.edu/

CAPT Stephen Gillespie, USN  
Professor of Naval Science

The purpose of the department of Naval Science is to develop midshipmen and enlisted officer candidates mentally, morally, and physically and to imbue them with the highest ideals of duty, honor, and loyalty in order to commission college graduates as Navy and Marine officers who possesses a basic professional background, are motivated toward careers in the naval services, and have a potential for future development in mind and character so as to assume the highest responsibilities of command, citizenship, and government.

There are two NROTC programs leading to a commission as a Navy or Marine Officer upon graduation: The Scholarship Program and the College Program.

The Scholarship Program leads to a commission in the Navy or Marine Corps. For students who receive a Navy/Marine Corps scholarship, the Navy will pay tuition and fees, provide a $375 book allowance each semester, supply uniforms, and pay a monthly tax-free subsistence allowance (currently $250 to $400 on a graduated scale; refer to the NROTC website (https://naval.dasa.ncsu.edu) for updates), to help defray the cost of normal board at the University. During the summers between school years, Navy scholarship students receive approximately 4 weeks of at-sea training conducted on ships, submarines, or aviation squadrons. For select students, training with mobile Explosive Ordnance Disposal (EOD)/SEAL teams is also possible during the summer prior to their senior year. Marine scholarship students participate in a Mountain Warfare Training course between sophomore and junior year and complete Marine Officer Candidate School between their junior and senior year. The minimum active duty obligation following graduation for scholarship students is five years but can vary greatly depending on the warfare community a student commissions into.

For those students who are interested in a commission and do not desire a scholarship, or for those who are seeking an opportunity to qualify for a scholarship after entering NC State, the College Program is available. Selection for the College Program is made from students already enrolled at NC State with applications being accepted and considered by the staff of the NROTC unit. Students enrolled in the College Program are provided uniforms and Naval Science textbooks. College Program students compete for selection to continue NROTC as “Advanced Standing” students at the end of their sophomore year. Selection is based on academic and demonstrated professional performance. Those selected for Advanced Standing receive a monthly subsistence allowance during the final two years of the program (refer to the NROTC website (https://naval.dasa.ncsu.edu) for amounts). College Program midshipmen participate in a single summer training cruise between the junior and senior year. Except for administrative differences, no distinction is made between Scholarship and College Program midshipmen. The minimum active duty commitment following graduation for College Program students is three years but can vary based on the warfare community a student commissions into.

Students in the College Program are eligible to compete for merit based scholarships annually. If selected for a merit based scholarship, the student would begin their next academic year on a full scholarship, identical to the Scholarship Program description above.

The Two-Year Scholarship Program offers an opportunity to participate in NROTC in the final two years of University study. This program is offered only intermittently by the Navy and may or may not be available during any given year.

Applications for this program must be completed by early Spring prior to the starting year. Upon selection, the candidate attends a six-week training course at Newport, Rhode Island, during the summer between the sophomore and junior years so that he or she may receive instruction in the Naval Science subjects normally covered in the first two years at NC State. Participants in this training course receive uniforms, room and board, and officer candidate pay during the summer period and, upon satisfactory completion of training, enter the NROTC program as third year students. The application process can be time consuming. In order to meet the Spring deadline, students are encouraged to contact the Department of Naval Science before December 1 of their sophomore year.

Graduates of the Navy program are commissioned as Ensigns and are selected to serve in one of the Navy’s front line warfare communities (Surface Warfare, Submarine/Nuclear Power, Pilot, Naval Flight Officer, Special Operations/EOD, or Special Warfare/SEAL). Graduates of the Marine program are commissioned as Second Lieutenants and attend the Marine Officer Basic School at Quantico, Virginia where they select their Military Occupational Specialty (MOS).

In addition to the courses taken for University credit, midshipmen attend leadership laboratory and physical training each week. At the completion of the four-year period students will have earned enough credit to apply for a minor in Naval Science.

Further information regarding application for and admission into the NC State Naval ROTC may be obtained on campus in Room 4165 Broughton Hall, by writing to the Professor of Naval Science, Campus Box 7310, NC State, Raleigh, North Carolina 27695-7310 or by contacting the unit recruiting officer, LT Anthony Scalabrino at 919-515-6218 or via E-mail at atscalab(at)ncsu.edu.

**TRIO Programs**

20 Enterprise Street, Suite 2  
NC State Box 7317  
Raleigh, NC 27695-7317  
Phone: 919-515-4577, Fax: 919-515-4581  
Website: http://trio.dasa.ncsu.edu

Marsha Pharr, Executive Director

The TRIO Programs are Federal outreach and student services programs designed to serve under resourced individuals, first-generation college students, and individuals with disabilities to progress through the academic pipeline from middle school to post baccalaureate programs.

The Talent Search and Upward Bound Programs serve pre-college level students. Talent Search serves grades 6-12 and Upward Bound serves 9-12 while the Student Support Services and the Student Support
Services STEM Programs support enrolled undergraduate NC State University students. These programs utilize a holistic approach in providing academic tutoring, personal counseling, mentoring, financial guidance, and other support services necessary for educational access, persistence and degree completion.

**Student Support Programs (SSS & SSS-STEM)** ([http://trio.dasa.ncsu.edu/student-support-services](http://trio.dasa.ncsu.edu/student-support-services))
NC State Box 7105
Raleigh, NC 27695-7105
Website: http://trio.dasa.ncsu.edu/student-support-services
Phone: 919-513-7774

Courtney Simpson, Director

NC State University TRIO Student Support Services (SSS) Program and Student Support Services STEM (SSS-STEM) strive to encourage and enhance educational opportunities for undergraduate students by providing academic and personal support to enhance academic skills, increase retention and graduation rates, and as appropriate, facilitate entrance into graduate and professional programs. TRIO SSS and SSS-STEM provide opportunities for academic and personal development by assisting students with college requirements, motivating students toward the successful completion of their post-secondary education and promoting graduate school enrollment through individualized coaching and tutoring at no cost to the student. The TRIO SSS and SSS-STEM Programs serve 260 students annually.

**Undergraduate Courses and Curricula and Academic Standards**

211A Park Shops
NC State Box 7105
Raleigh, NC 27695-7105
Website: http://oucc.ncsu.edu
Phone: 919-515-9769 Fax: 919-515-4416

Li Marcus, Director

The Office of Undergraduate Courses and Curricula and Academic Standards manages the implementation of the General Education Program (GEP) and the approval of all undergraduate course and curricula offerings at NC State. The office also maintains related guidelines, instructions, forms, and archives. The office serves as a point of contact for on-campus as well as off-campus entities and works directly with the University of North Carolina General Administration (UNC-GA), the University Courses and Curricula Committee (UCCC), the Council on Undergraduate Education (CUE), Registration and Records, the Colleges, and the Office of the Provost regarding undergraduate course and curricula related matters.

**Undergraduate Research** ([https://undergradresearch.dasa.ncsu.edu](https://undergradresearch.dasa.ncsu.edu)) ([OUR](https://undergradresearch.dasa.ncsu.edu))

211T Park Shops
NC State Box 7576
Raleigh, NC 27695-7576
Website: http://undergradresearch.dasa.ncsu.edu
Phone: 919-513-0095 Fax: 919-513-7542

Chris Ashwell, Director

The office of Undergraduate Research supports and promotes excellent undergraduate opportunities in discovery-, inquiry- and creativity-based scholarship through mentored research experiences with NC State faculty and other national and international scholars and professionals. Undergraduate Research is scholarly study in any discipline in which independent scholarship culminates in advancements in science, technology, engineering, business, the arts, or humanities. Any student chosen by a mentor may participate in undergraduate research. Students from any discipline can engage in the excitement of scholarly research and present their work at quarterly symposia. Research and travel grants are available.

**University Tutorial Center** ([http://www.ncsu.edu/tutorial_center](http://www.ncsu.edu/tutorial_center)) ([UTC](http://tutorial.ncsu.edu))

101 Park Shops
NC State Box 7118
Raleigh, NC 27695-7118
Website: https://tutorial.dasa.ncsu.edu
Phone: 919-515-3163 Fax: 919-515-4416

Barbara B. Windom, Director

The University Tutorial Center provides free academic assistance to NC State undergraduate students enrolled for credit in many challenging 100- and 200- level math, physics, and chemistry classes. Several types of assistance are available that are designed to best meet the students’ needs, including tutoring by appointment, group tutoring, and Supplemental Instruction (SI). In addition, Writing and Speaking consultations are available to both undergraduate and graduate students. They provide assistance to all students who need help at any stage of the writing process in the English language.

Students are eligible to become a tutor for the UTC if they have an established GPA of 3.25 or better and least a B+ in the course(s) they wish to tutor. All new tutors are required to take USC 210, Introduction to College Tutoring, during the first semester of employment. All tutors are trained in techniques that are designed to help students become independent learners.

**University Honors Program** ([http://www.ncsu.edu/honors](http://www.ncsu.edu/honors)) ([UHP](http://honors.dasa.ncsu.edu))

219 Clark Hall
NC State Box 8610
Raleigh, NC 27695-8610
Website: https://honors.dasa.ncsu.edu/
Phone: 919-513-4078 Fax: 919-513-4392

Sue Carson, Interim Executive Director

The University Honors Program (UHP) is a highly selective academic program that seeks to provide a transformative liberal learning experience which empowers students to critically engage meaningful problems in the world. Students in the program develop and present their work at quarterly symposia. Research and travel grants are available.

Application to the University Honors Program is by invitation only. Incoming freshmen are invited to apply after they have been accepted to the University. All invitations are issued on a rolling basis throughout the University’s admissions process (typically mid-December through
February). If you do not receive an invitation, but believe you are a strong candidate for the University Honors Program, you can contact the UHP office and request an invitation to apply. Admission is competitive and based on evidence of motivation to pursue research and scholarship in the discipline, academic achievement, extracurricular activities, and our desire to maintain an Honors community that includes students from a diversity of academic disciplines. Current NC State students may also request an invitation to apply.

The curricular core of the UHP is the HON seminars, which are small, intensive, graduate-style, interdisciplinary courses designed to expose students to how multiple disciplines approach and try to solve problems. University Honors Program students are required to take a minimum of 12 credit hours of HON seminars (generally one per semester in their first two years). These seminars are taught by some of the most innovative professors at NC State. The UHP also offers experiential learning courses that enable them to earn credit for activities such as working with a faculty member on a project or with a local museum to create educational materials for a new exhibit. The other major curricular dimension of the UHP is the Capstone project, which is a 6-credit-hour, 2 semester long independent research project, conducted under the guidance of a faculty mentor. The Capstone is the culmination of a student's NC State and University Honors Program experience, because it is the process through which students truly move from being knowledge consumers to knowledge producers. The Capstone requires that a student articulate a problem or issue of interest and then use the tools and methods of their discipline in order to make a new discovery.

The Honors Village is a collaborative partnership between the University Honors Program and University Housing. The mission of the Honors Village is to create a community of young scholars which is engaged in the societal issues, provide opportunities for growth, and is grounded in critical scholarship. The Honors Village advances the UHP's mission of engaged learning and research in the discipline through creating opportunities for students to become curious, informed, and critically-minded. The community boasts representation from all colleges and all academic years (Freshman through Senior) and is home to NC State's longest standing Scholar in Residence Program. The Honors Village is located in the historic renovated Quad residence halls on East Campus.

The Honors experience at NC State includes Honors Programs located in the colleges and departments. Students are invited to participate in these programs at various times, depending upon the specific program (generally the second semester of the sophomore year or first semester of the junior year). Many of the students in the University Honors Program are also participants in one or more of the college or departmental Honors Programs.

University Scholars Program (USP)

Sullivan Hall
Campus Box 7316
Raleigh, NC 27695-7316
Website: http://scholars.dasa.ncsu.edu
Phone: 919-515-2353

Sean Cassidy, Senior Associate Director

Throughout history, men and women have been empowered by imagination, faith, curiosity, a sense of adventure, and an awe of the world around them. They have been emboldened by a willingness to take personal risks in order to explore the secrets of the unknown. They have stretched the dimensions of our frontiers in ways that are extraordinary... and the exploration to uncover the truths of the universe, both great and small, continues.

The University Scholars Program invites talented, creative, curious students to join us at NC State for a fun and exciting adventure that will lead to a lifetime of knowledge in action.

“The great end of Life is not knowledge – but action.” Thomas Huxley. Huxley was right, and the University Scholars Program (USP) of North Carolina State University embraces this challenge: To introduce students to the visual and performing arts, to encourage them to consider issues drawn from the sciences and politics, to offer them opportunities to connect their academic and personal goals, and through these experiences empower them to be informed citizens, ethical leaders, and active contributors to our society. This mission provides the foundation for our program objectives:

- Promote the personal, intellectual, and cultural development of University Scholars.
- Foster community and promote student learning, reflection, and service.
- Promote an inclusive environment by supporting a diversity of people, cultures, and perspectives.
- Encourage students to discuss and debate social and political issues to help them become informed citizens, ethical leaders, and active contributors to our society.
- Encourage students to develop a commitment to civil and thoughtful discourse which respects divergent views and diverse experiences, seeks multiple and competing sources of information when analyzing complex issues, and values the ability to articulate a viewpoint with evidence and clarity.
- Provide University Scholars with opportunities for leadership and professional development.
- Encourage academic excellence and a commitment to advanced and independent academic inquiry among University Scholars.

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Environmental Sciences (http://www.ncsu.edu/envi)

2231 Jordan Hall
NC State Box 8008
Raleigh, NC 27695-8008
Phone: 515-5780

William E. Winner, Director - wewinner@ncsu.edu

Environmental sciences, in the broadest sense, is the study of the relationships between humans and nature. Using basic knowledge about the world's environmental systems produces the basis for innovation leading to sustainable socio-economic development. Environmental sciences use interdisciplinary approaches that link natural science and social science disciplines. Such interdisciplinary approaches are essential for understanding changes in a rapidly changing world, and for understanding our past, present, and future. Environmental scientists will help ensure human prospects by improving both socio-economic development and environmental quality through innovation in new technologies and policies.

Public interest about environmental issues is increasing. Protecting and improving the environment involves knowledge and systematic problem-solving skills that are essential for environmental sciences.
North Carolina State University's environmental sciences degree program provides sound, individualized academic programs for students who can develop a wide range of careers. In addition, students can pursue post-graduate academic programs in areas such as environmental law, business, environmental education, and traditional masters and PhD graduate degrees. Successful completion of the B.S. degree in Environmental Sciences prepares students for careers and personal lives in a rapidly changing world.

Specific curriculum requirements are available on the Registration and Records website (http://www.ncsu.edu/registrar/curricula).

**Distance Education and Learning Technology Applications (DELTA)**

Thomas K. Miller III, Vice Provost for DELTA  
Rebecca Swanson, Associate Vice Provost, Distance and Distributed Education  
Melissa Williford, Director, Distance Education Administrative Services  
Sharon Broere, Associate Director, Distance Education Administrative Services  
Lynda Hambourger, Academic Advisor

DELTA centrally administers NC State’s Online and Distance Education programs, activities and support services. We schedule online and distance-based courses and sections. We provide application, enrollment and student advising services for non-degree studies’ students. We provide student communications, course detail information, a virtual orientation, an online FAQ, campus proctoring services and remote testing arrangements. DELTA collaborates with other NC State units to provide library resources, student registration, campus authentication, financial aid and billing services for Online and Distance Education students. For more information, visit the Online and Distance Education website (https://online-distance.ncsu.edu).

DELTA also manages the university’s learning technology infrastructure, including various asynchronous learning management systems (WolfWare, Moodle), Blackboard Collaborate, a tool for synchronous online teaching and learning, and lecture capture technologies for all technology-assisted courses, whether online or on-campus.
Other Academic Departments

In addition to the many degree programs offered by NC State's nine colleges, minors and degrees are available in areas like Health and Exercise Studies and Biotechnology. Check out the links in the sidebar to find out about these offerings!

Biotechnology Program

An undergraduate Minor in Biotechnology is available for all students who have met prerequisites in biology and chemistry. This Program is university-wide and combines NCSU's strengths in the life sciences, agriculture, and engineering. The Minor is ideal for students who wish to pursue graduate studies in the life sciences, biomedical professional degrees, or work in research and development in industry or government agencies.

The Biotechnology Minor combines cutting-edge, laboratory-intensive coursework with related independent undergraduate research experiences. Examples of advanced laboratory research in the BIT Program include recombinant DNA technology, RNA interference, PCR, neuroscience, epigenetics, deep sequencing analysis, CRISPR genome engineering, protein purification, metagenomics, proteomics, and more.

Many curricula offer a great deal of theory about molecular biotechnology, but few allow for the level of hands-on experience that the Biotechnology Program provides.

For more information about the Biotechnology Minor and the most recent list of our courses, please visit the Biotechnology Program website (http://biotech.ncsu.edu).

Military Sciences (Air Force ROTC)

Department of Aerospace (Air Force ROTC)

Lieutenant Colonel Jeffry Onan, Commander and Department Chair
Reynolds Coliseum
2411 Dunn Ave.
NC State Box 7308
Raleigh, NC 27695-7308
Phone: 919-515-2417  Fax: 919-515-4456
Website: https://airforce.dasa.ncsu.edu/

Professors:
Lieutenant Colonel Jeffry Onan, Professor of Aerospace Studies
CAPT Corlethia Charles, Assistant Professor of Aerospace Studies
CAPT Nathanael Farrington, Assistant Professor Aerospace Studies

Our faculty professors are active duty officers from diverse professional backgrounds that enrich the learning environment.

Air Force Reserve Officer Training (AFROTC) Program

The AFROTC program at NC State University is geared toward students who desire to earn a commission as a Second Lieutenant in the U.S. Air Force. However, any student from NC State, or one of our four crosstown colleges, who wish to learn about the U.S. Air Force can take any Air Force ROTC course with no obligation or commitment. All students who complete the Aerospace Studies academic program of study with a minimum of 15 hours in aerospace studies are eligible to receive an Aerospace Studies minor.

The four-year AFROTC program that leads to a commission as a U.S. Air Force Officer allows freshmen to enroll in Aerospace Studies courses in the same manner as other college courses for the first two years. It is during this time a student may join the program and become an Air Force ROTC cadet. All cadets must be attending college in “full time” status. Aerospace Studies courses are taken as free electives and cadets incur no military obligation unless they are receiving an AFROTC scholarship. The first two years in the AFROTC program are called the General Military Course (GMC) during which cadets learn the basics of military discipline, followership, and begin preparation for field training. The last two years of AFROTC comprise the Professional Officer Course (POC) where cadets lead each other through a time-tested leadership laboratory training environment that instills both character and leadership skills needed in preparation for life as an active duty officer. The pinnacle training event for AFROTC occurs in the summer between the sophomore (AS200) and junior (AS300) year when a cadet attends intense field training held at Maxwell AFB, Alabama and Camp Shelby, Mississippi.

For exceptionally qualified cadets, the four-year program can be compressed to as little as two and one half years for those who do not complete all four AS100 and AS 200-level courses: The Foundation of the United States Air Force I and The Evolution of USAF Air and Space Power I are offered in the fall semester. The Foundations of the United States Air Force II and The Evolution of USAF Air and Space Power II are offered in the spring semester while enrolled in the Air Force ROTC program. Interested students must contact the Professor of Aerospace Studies to determine eligibility requirements.

Cadets at every level have numerous opportunities to further their knowledge of the Air Force and develop leadership. Throughout the school year, cadets have opportunities to examine all aspects of life in the Air Force and gain leadership experience through Air Force base visits, flying opportunities, and social activities. Additionally, a variety of summer programs allow cadets to visit bases and participate in programs such as the US Air Force Academy Free Fall program, manned glider training, and worldwide cultural immersion programs. POC cadets have similar opportunities, with focus on programs related to the cadet’s desired active duty career area, both in the U.S. and abroad.

Upon university graduation and satisfactory completion of the Air Force ROTC program, a cadet is commissioned a second lieutenant in the USAF and is obligated to serve a minimum of four years on active duty.

Scholarship Opportunities and Stipend

Cadets enrolled in the AFROTC program are encouraged to apply for Air Force ROTC scholarships. Competitive scholarships are awarded by the Air Force and are based primarily on college academic achievement, displayed leadership capabilities and the needs of the Air Force for specific academic degrees in technical and foreign languages.
Additionally, special scholarships are awarded to fill critically needed academic majors within the Air Force as long as eligibility is met. AFROTC scholarships pay for tuition, fees, books, and provide cadets a stipend each month during the academic year for miscellaneous expenses. Stipends for AFROTC scholarship cadets vary according to the cadet’s year of academic enrollment in AFROTC.

For example, scholarship freshmen currently receive $300 per month, sophomores $350 per month, juniors $450 per month, and seniors $500 per month. Additionally, cadets who complete field training and are enrolled in the POC receive a stipend regardless of scholarship status. All scholarships have minimum academic standards that must be maintained.

Curriculum

The AFROTC educational program provides professional preparation for future Air Force officers. Courses in the first two years focus on Air Force missions, organization, military career opportunities, and the history of airpower. The focus in the last two years is on leadership and management, methods for managing conflict, in-depth examination of national security, policy and American defense strategy. A progressive development of communicative skills, oral and written, is integrated into each course. Officership is developed through lessons taught in the classroom environment and then applied in the associated leadership laboratory (only cadets may take leadership lab). In addition, traditional military social functions, base orientation trips, and cadet-centered programs further enhance understanding of the USAF.

Eligibility

All full-time freshmen and sophomores with at least a 2.0 cumulative GPA and a desire to seek a commission may enroll in the GMC program without obligation to the Air Force through enrollment in the AS100 - The Foundation of the United States Air Force I and the Foundations of the United Air Force II and AS200 - The Evolution of USAF Air and Space Power I and The Evolution of USAF Air and Space Power II blocks of Aerospace Studies curriculum. To enter the POC, cadets must meet physical, medical and academic requirements, and successfully complete field training (typically between your second and third year). In addition, some age, citizenship and background restrictions apply; contact the department for more details. Students desiring to enter the four-year program simply register for the AS100 course. All students interested should contact the Air Force ROTC office on campus in Broughton Hall 3229, (919) 515-2417, by e-mail at airforce@ncsu.edu or write to: Professor of Aerospace Studies, NC State, Box 7308, Raleigh, NC 27695-7308.

Organization

The Air Force ROTC Cadet Corps, nicknamed “Wolfpack Warriors,” is organized as a cadet wing staffed entirely by cadets for leadership development. They are assisted and advised by experienced active duty officers and non-commissioned officers who are assigned as instructors to the detachment. Three collateral organizations, Arnold Air Society, Wolfpack Warrior Booster Club and Honor Guard, support the cadet wing organization as well as the university and community.

Uniforms

Uniforms are provided by the federal government and are worn by cadets on the day of Leadership Laboratory (Wednesday) or as specified by cadet corps leadership.

View the NC State Air Force [website](http://www.ncsu.edu/afrotc)

Department of Military Science (Army ROTC)

Department of Military Science - Army

William Neal Reynolds Coliseum
2411 Dunn Ave.
NC State Box 7309
Raleigh, NC 27695-7309
Phone: 919-515-0863
Website: https://army.dasa.ncsu.edu/
Email: army-rotc@ncsu.edu

Mission

The mission of the Army ROTC Program is to train college men and women to become commissioned officers in sufficient numbers to meet Active Army, Army Reserve and National Guard requirements.

Program of Instruction

The Army ROTC program consists of a voluntary Basic Course (freshmen and sophomore level) and a two-year Advanced Course (junior and senior level) that includes a four-week Cadet Leaders Course in the summer prior to the senior year. One may enter the Advanced Course without participating in the Basic Course by any of the following methods:

- **Simultaneous Membership Program (SMP):** Members of Reserve or National Guard units may take advantage of this program and, if accepted, enroll directly into the Advanced Course. SMP participants will be assigned to a unit near NC State or home for part-time monthly officer training and will receive the ROTC Advanced Course subsistence payment of $450 per month for Juniors and $500 per month for Seniors, plus approximately $200 per month for the one weekend of Reserve or Guard training. In addition, two weeks of Annual Training will be required for which the individual will receive full pay.

- **Prior Service:** Service veterans are eligible for placement into the Advanced Course.

- **Leader’s Training Course (LTC):** Successful completion of the four-week basic summer camp, held at Ft. Knox, Kentucky is an alternative to the Basic Course. Students with strong academic credentials may receive a scholarship after completing this course.

- **Transfer Credit:** Students entering as transfer students from other institutions may receive credit for work completed at other Senior ROTC units.

- **Junior ROTC:** Students who have participated in a Junior ROTC in high school may receive placement credit as determined by the Professor of Military Science.

Eligibility

All full-time freshmen and sophomores may enroll in any Military Science Basic Course offering without obligation to the Army. To be eligible for participation in the Advanced Course, applicants must be in good academic standing and demonstrate satisfactory performance in the Basic Course. Additionally, applicants for commissioning must be able to be commissioned by their 30th birthday. An age waiver may be obtained as long as the individual will be commissioned prior to his/her 32nd birthday. A student must have a minimum of two years remaining as a full-time student at either the undergraduate or graduate level.
Professional Military Education

There are five Professional Military Education (PME) courses which must be taken or have an approval of a waiver obtained for them. All but one content area (Military History) are automatically met by completion of the university’s General Education Distribution Requirements. PME requirements must be completed or waived prior to commissioning.

Delays for Graduate Study

Qualified ROTC graduates may delay their entry into active service in order to obtain advanced academic degrees. Fellowships for advanced academic study are available to selected ROTC graduates, allowing up to two years of graduate study while receiving full pay and allowances plus payment for tuition, all fees, textbooks, and required supplies.

Financial Aid

Army scholarships of two to four years which pay for tuition, all fees and textbooks are available on a competitive basis to students who are strongly motivated and academically qualified. Students in the Advanced Course who are preparing for commissioning receive a subsistence allowance of $450 per month for Juniors and $500 per month for Seniors (tax free) up to a maximum of $4500. All Advanced Course cadets are paid approximately one-half the basic pay of a second lieutenant while attending the four-week Cadet Summer Training, plus travel allowances to and from camp.

Service Opportunities

Scholarship recipients may serve four years active duty upon commissioning or eight years in the United States Army Reserve or National Guard. Service consists of one weekend drill per month and two weeks annual training.

Program Features

Army ROTC classes are unique, offering instruction and a practical, working knowledge of leadership. Students are challenged early in the ROTC training to enable them to develop sound judgment, the desire to achieve, acceptance of responsibility, personal confidence, and to learn the principles of personnel management. The primary vehicle for this training during the academic year is Leadership Laboratory, where cadet officers and non-commissioned officers conduct instruction under the supervision of the Department of Military Science’s faculty. The intensive Cadet Summer Course is extremely effective in developing an individual emotionally, mentally and physically. All Army ROTC training is focused on preparing the student to meet the challenges of tomorrow’s society, whether in a military or civilian career.

Distinguished Military Students

The University names outstanding Army ROTC students as Distinguished Military Graduates.

Uniforms

Uniforms for contracted Cadets are provided by the federal government.

Departmental Offices

Our Administrative Office is located at the Reynolds Coliseum at 2411 Dunn Ave.

Music Department

Price Music Center
Campus Box 7311
Raleigh, NC 27695-7311
Phone: (919) 515-2981
Fax: (919) 515-4204
Email: music-info@ncsu.edu

The Music Department is committed to providing broad-based educational opportunities for NC State students through a variety of musical experiences and introductory and upper-level academic courses. Departmental faculty seek to assist students in developing musical insights, musical skills, and the capacity to perceive and respond to music in its historical and cultural contexts.

Opportunities for direct student participation as performers include many choral and instrumental organizations. Membership in any ensemble is open to students with a disciplined interest in music. Auditions are scheduled during summer orientation, at the beginning of each semester, and by appointment with the conductor of the group. For further information, please call (919) 515-2981 or visit the Music Department website (http://www.ncsu.edu/music) for audition information.

The department offers a variety of courses, most of which may be taken to fulfill specific general education program. Any course may be taken as a free elective. A 20-hour music minor is offered for qualified undergraduate students who wish to engage in the serious study of music. Emphases include history, liberal arts, composition, and performance—piano, vocal, or instrumental.

The department also serves as a cultural resource for the university community and the public at large through concerts presented by student musical organizations, music faculty, and visiting artists. Concerts are open to students and the public.

Minor in Music

The Music Department offers a 20-hour minor in Music for qualified undergraduate students who wish to engage in the serious study of music within a curricular framework. This minor is designed to foster creative thought, aesthetic understanding, and artistic self-expression. Students may choose one of four emphases:

1. History
2. Liberal Arts
3. Composition
4. Performance

Core courses include one music theory, aural skills, class piano and a survey of music in Western Civilization. Applications are available in Price Music Center, Room 203. A Bachelor or Arts degree with a focus in Music is available through the Arts Studies Program in the College of Humanities and Social Sciences. For more information about the minors, please visit the Music Department’s website (http://www.ncsu.edu/music) or contact Dr. John Fuller at 919-515-8284 or jafuller@ncsu.edu.

Arts Entrepreneurship

The Music Department also offers a minor in Arts Entrepreneurship, the first of its kind. There are a number of unique aspects to the Arts Entrepreneurship Minor. Based on the concepts of both intellectual and experiential readiness, the Minor helps emerging arts entrepreneurs use
a broad knowledge base to create successful arts ventures. Using an innovative classroom experience, a focus on informed decision-making and a cutting-edge curriculum, this is simply the most comprehensive a program on the topic in the country.

For more information please visit the Arts Entrepreneurship website (http://www.ncsu.edu/music/ema), or contact Dr. Gary Beckman at 919-515-1637 or gdbeckma@ncsu.edu.

Department of Naval Science (Naval ROTC)

Department of Naval Science (Naval ROTC)
4172 Broughton Hall
2601 Stinson Drive
NC State Box #7310
Raleigh, NC 27695-7310
Phone: 919-515-8931
Website: https://naval.dasa.ncsu.edu/

CAPT Marc Stern
Professor Naval Science

Mission

The purpose of the Department of Naval Science is to develop midshipmen and enlisted officer candidates mentally, morally, and physically and to imbue them with the highest ideals of duty, honor, and loyalty in order to commission college graduates as Navy and Marine officers who possess a basic professional background, are motivated toward careers in the naval services, and have a potential for future development in mind and character so as to assume the highest responsibilities of command, citizenship, and government.

4-year NROTC Program

There are two NROTC programs leading to a commission as a Navy or Marine Officer upon graduation: the Scholarship Program and the College Program.

Scholarship Program

The Scholarship Program leads to a commission in the Navy or Marine Corps. For students who receive a Navy/Marine Corps scholarship, the Navy will pay tuition and fees, provide a $375 book allowance each semester, supply uniforms, and pay a monthly tax-free subsistence allowance (currently $250 to $400 on a graduated scale; refer to the NROTC website (https://naval.dasa.ncsu.edu) for updates), to help defray the cost of normal board at the university. During the summers between school years, Navy scholarship students receive approximately 4 weeks of at-sea training conducted on ships, submarines, or aviation squadrons. For select students, training with mobile Explosive Ordnance Disposal (EOD)/SEAL teams is also possible during the summer prior to their senior year. Marine scholarship students participate in a Mountain Warfare Training course between sophomore and junior year and complete Marine Officer Candidate School between their junior and senior year. The minimum active duty obligation following graduation for scholarship students is five years but can vary greatly depending on the warfare community a student commissions into.

College Program

For those students who are interested in a commission and do not desire a scholarship, or for those who are seeking an opportunity to qualify for a scholarship after entering NC State, the College Program is available. Selection for the College Program is made from students already enrolled at NC State with applications being accepted and considered by the staff of the NROTC unit. Students enrolled in the College Program are provided uniforms and Naval Science textbooks. Students in the College Program are eligible to compete for merit based scholarships annually. If selected for a merit based scholarship, the student would begin their next academic year on a full scholarship, identical to the Scholarship Program description above.

If not selected for a three or two year side load scholarship, College Program students compete for selection to continue NROTC as “Advanced Standing” students at the end of their sophomore year. Selection is based on academic and demonstrated professional performance. Those selected for Advanced Standing receive a monthly subsistence allowance during the final two years of the program (refer to the NROTC website (http://catalog.ncsu.edu/undergraduate/otheracademicdepartments/navalsciencenavalrotc) for amounts). College Program midshipmen participate in a single summer training cruise between the junior and senior year. Except for administrative differences, no distinction is made between Scholarship and College Program midshipmen. The minimum active duty commitment following graduation for College Program students is three years but can vary based on the warfare community a student commissions into.

Two-Year Programs

The Two-Year Scholarship Program offers an opportunity to participate in NROTC in the final two years of University study. This program is offered only intermittently by the Navy and may or may not be available during any given year.

Applications for this program must be completed by early Spring prior to the starting year. Upon selection, the candidate attends a six-week training course at Newport, Rhode Island, during the summer between the sophomore and junior years so that he or she may receive instruction in the Naval Science subjects normally covered in the first two years at NC State. Participants in this training course receive uniforms, room and board, and officer candidate pay during the summer period and, upon satisfactory completion of training, enter the NROTC program as third year students. The application process can be time consuming. In order to meet the Spring deadline, students are encouraged to contact the Department of Naval Science before December 1 of their sophomore year.

Commissioning and Service

Graduates of the Navy program are commissioned as Ensigns and are selected to serve in one of the Navy’s front line warfare communities (Surface Warfare, Surface Nuclear, Submarine/Nuclear Power, Pilot, Naval Flight Officer, Special Operations/EOD, or Special Warfare/SEAL). Graduates of the Marine program are commissioned as Second Lieutenants and attend the Marine Officer Basic School at Quantico, Virginia where they select their Military Occupational Specialty (MOS).

Curriculum

Due to the increasingly advanced technologies being employed by the Navy and Marine Corps, candidates for Navy Commissions are strongly encouraged to select academic majors in mathematics, engineering, or
scientific disciplines. Scholarship midshipmen are required to pursue a major that falls within their awarded scholarship tier level, while College Program midshipmen are free to choose their area of major study.

The NROTC training program emphasizes academics, leadership, military organization, and physical fitness. Required Naval Science courses are fully accredited, taken for free elective credit and include NS 210 Leadership and Management, NS 225 Navigation, NS 315 Naval Engineering, NS 325 Naval Weapons Systems, NS 330 Evolution of Warfare, NS 415 Naval Operations, NS 420 Naval Leadership and Ethics, and NS 430 Amphibious Warfare. Additional University courses may be required depending upon one’s major, however, all Navy option Scholarship midshipmen must complete:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
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<tbody>
<tr>
<td>MA 141</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MA 241</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>PY 205</td>
<td>Physics for Engineers and Scientists I</td>
<td>3</td>
</tr>
<tr>
<td>PY 208</td>
<td>Physics for Engineers and Scientists II</td>
<td>3</td>
</tr>
</tbody>
</table>

Other core courses include two semesters of a NROTC approved English course, a World Culture/Regional Study course, and a US History/National Security Policy course. Most courses required for NROTC other than select NS courses also qualify for GEP requirements. In addition to the courses taken for University credit, midshipmen attend leadership laboratory and physical training each week. At the completion of the four-year period students will have earned enough credit to apply for a minor in Naval Science.

Midshipmen Life

Academic excellence is emphasized and commensurate participation in the full range of campus extra curricular activities is encouraged. The NROTC unit is organized as a midshipmen battalion to facilitate leadership development. The battalion is staffed entirely by midshipmen under the supervision of staff instructors. Additionally, midshipmen have opportunities to examine all aspects of life in the Navy and Marine Corps and gain leadership experience through field trips, summer cruise, and social activities.

Further information regarding application for and admission into the NC State Naval ROTC may be obtained on campus in Room 4165 Broughton Hall, by writing to the Professor of Naval Science, Campus Box 7310, NC State, Raleigh, North Carolina 27695-7310 or by contacting the unit recruiting officer, LT Anthony Scalabrino at 919-515-6218 or via email at atscalab@ncsu.edu.

The Department of Military Science (Army ROTC), the Department of Aerospace Studies (Air Force ROTC), and the Department of Naval Science (Navy ROTC) are separate academic and administrative subdivisions of the institution. Students in the ROTC programs will receive free elective credit for Aerospace Studies (AS), Military Studies (MS), or Naval Science (NS) courses up to the limit of free electives in their curriculum.

Health and Exercise Studies

Carmichael Gymnasium, Room 2000
Dr. Tommy Holden, Department Head and Teaching Professor

All North Carolina State University students are required to complete two credit hours of Health and Exercise Studies (HES) activity courses to meet the University General Education Program (GEP). Students must take at least one credit hour of a 100-level Health and Exercise Studies course. 100-level activity courses focus on fitness and wellness with the HESF prefix.

The second credit hour required to fulfill the GEP can be an additional 100-level Health and Exercise Studies activity course or a 200-level activity course, which focuses on skill-acquisition. Students may choose a class that offers a familiar skill, or may opt to experience a new activity.

Students with disabilities will be assisted by the Department of Health and Exercise Studies, Student Health Service and the Disability Services Office to help choose appropriate classes. Only “activity” courses, not elective “lecture” courses, may be used to satisfy the NC State GEP HES requirement. Students have the option of taking HES courses on an S/U basis.

For more information, please visit the Health and Exercise Studies website (http://hes.dasa.ncsu.edu). (https://dasa.ncsu.edu/tag/hes)

Minor in Sports Science

The Department of Health and Exercise Studies offers a 16 credit hour minor in Sports Science, designed for students who desire a greater understanding of the physiological and biomechanical principles of exercise and fitness. The minor provides coursework in anatomy, physiology, nutrition, biomechanical principles, prevention and treatment of athletic injuries, exercise leadership, and health behavior. For additional information, contact Darrin DeReu at dwdereu@ncsu.edu.

Minor in Outdoor Leadership

The Department of Health and Exercise Studies offers a 16 credit hour minor in Outdoor Leadership that is designed for undergraduate students desiring to pursue careers as outdoor leaders of adventure-based programs or for those who wish to enhance their personal development and enjoyment. Students will develop a foundation of essential leadership skills and experience through course work focusing on outdoor skills and leadership training. Students will also have an opportunity to apply theory to practice through a practicum. For additional information, contact Terry Dash at tsdash@ncsu.edu.

Minor in Coaching Education

The Department of Health and Exercise Studies offers a 17 credit hour Minor in Coaching Education designed to prepare students to assume coaching responsibilities with a sound theoretical and practical background. The minor provides students with a foundation of essential coaching skills and concepts as well as the basic principles of coaching philosophy, sport psychology, sport management, and prevention and care of sport related injury. The practical application of sport science, physiology, and kinesiology, as well as strategies involved in coaching specific sports, are also addressed. For additional information, contact Keith Howard at kphoward@ncsu.edu.

Minor in Health

The Department of Health and Exercise Studies offers a 15 credit hour minor in Health which is designed for undergraduate students wishing to pursue careers in health-related professions and for students wishing to gain in-depth knowledge in various contemporary health-related topics for their personal development. The minor provides students with theories, concepts, and practical skills concerning health behavior and includes a practicum to apply theory to practice. For additional information, contact Chris Ousley at csousley@ncsu.edu.
Minor in Dance

The department of Health and Exercise Studies offers a 16 credit hour Dance Minor that is designed for students who wish to delve deeper into dance studies in an intellectual, creative, and practical capacity to propel them forward in career, service and artistry. The coursework is balanced between theory courses, creative inquiry, and technical proficiency. The student has the opportunity to select the specific courses which best fulfill his/her needs while maintaining an overall balance. A student in the Dance Minor may be preparing for graduate study or for work as a performer, choreographer, educator, or dance therapist. The Dance Minor also enhances students' studies as they prepare for careers and service as arts entrepreneurs or administrators, physical therapists, physicians, or in disciplines such as Africana studies, design, film, and engineering. For additional information, contact Beth Fath at beth_fath@ncsu.edu.
NC State University knows that there's more to academic success than books and research papers. That's why we offer a full range of services to support students in all aspects of their academic careers. Our full-service Student Health Center helps keep students healthy, while our Career Center helps them plan for life after graduation.

Check out the links in the sidebar to see all the ways that NC State can help you succeed!

Campus Community Centers

African American Cultural Center

The mission of the African American Cultural Center is to promote awareness of and appreciation for the rich history, cultural traditions and global influences of the African diaspora through activities and events that enhance academic excellence and strengthen cultural competence for the campus and surrounding communities.

Founded in 1991 in the only building on NC State's campus named for an African American, Dr. Augustus M. Witherspoon, the African American Cultural Center is a meeting place that fosters a strong sense of community for African and African-American students, faculty, staff and alumni. We welcome you to attend our programs and events and to visit the Art Gallery and Library in Witherspoon Student Center.

To learn more about the African American Cultural Center, visit our website [here](http://www.ncsu.edu/aacc) and follow us on Facebook [here](https://www.facebook.com/ncsuaacc) and Twitter [here](https://twitter.com/ncsuaacc). Our main office is located on the 3rd floor of Witherspoon Student Center.

The GLBT Center

The mission of the NC State GLBT Center is to engage, develop, and empower members of the gay, lesbian, bisexual and transgender communities and their allies. In order to fulfill that mission, we:

- help students connect to form social support networks
- offer identity-based and health-related information and resources
- consult with students individually and collectively on issues related to personal identity and academic success
- refer students to a wide variety of resources on campus and in the local community
- provide professional and leadership development opportunities
- host educational events and programs

Our vision is of a campus where students, staff, faculty and alumni feel a shared responsibility to increase their individual understanding of and comfort with diversity, to enhance their ability to connect with members of their own communities, to build coalitions across identity groups and to work collaboratively to raise awareness, promote respect and create a culture where they can advocate for equity, inclusion and social justice on behalf of themselves and others.

Goals

- Foster a safe and inclusive environment for students, staff, faculty and alumni of all genders and sexualities, for individuals exploring their sexual orientation and gender identity/expression and for allies of the GLBT community.
- Affirm the identities of GLBT and questioning students, staff, faculty and alumni while also acknowledging and helping to raise awareness about the way the lived experiences of GLBT individuals vary and are influenced by their race, religion, ethnicity, age, ability status, social class and other social characteristics.
- Collaborate with departments, offices and organizations across campus to engage members of the NC State community in conversations about issues of identity, diversity, community building, advocacy and social justice.
- Promote awareness and provide education with respect to the issues faced by GLBT individuals and their allies to enable members of the campus community to play an active role in helping to combat sexism, genderism, transphobia, homophobia, biphobia and heterosexism.
- Advise administrators on issues related to GLBT campus climate and advocate for inclusive policies and practices.
- Provide information and resources to help staff and faculty develop GLBT-inclusive work and classroom environments and course curricula.
- Maintain an active and engaged community for GLBT and allied students, staff, faculty and alumni of NC State while networking with GLBT groups and organizations in the local area and throughout North Carolina.

For more information about our educational workshops, events, student organizations, resources or support services, visit our website [here](http://oied.ncsu.edu/glbt), call us at 919-513-9742 or stop by the fifth floor of Talley for a visit.

Multicultural Student Affairs

Multicultural Student Affairs researches, designs and implements programs that promote the academic success, retention and graduation of students, with an emphasis on students from historically underrepresented and marginalized ethnic populations. Our programs and services aim to expand students' horizons while honoring their respective cultural experiences.

Multicultural Student Affairs collaborates with many university organizations to conduct programs to enhance personal, professional and cultural development and student success. Programs and services have included orientation symposia, peer mentoring, heritage month programming, cultural celebrations, academic recognition programs, student leadership development, recruitment and advising.

We welcome any NC State student to our programs and services. Visit our website [here](http://www.ncsu.edu/msa) or follow us on Facebook [here](https://www.facebook.com/NCSStateMSA), Twitter [here](https://twitter.com/NCSState_MSA) and Instagram [here](https://www.instagram.com/ncstatemsa). We are located on the 4th floor of Talley Student Union.

The Women's Center

The Women's Center is a catalyst and resource that advances gender equity and social justice through education, advocacy, and leadership for the campus community. Although we are a “Women’s Center”, we see gender on a continuum and we welcome EVERYONE to the Center.

Together with our Office for Institutional Equity and Diversity (OIED) partners, we envision and work for a Wolfpack community that champions gender equity and promotes respect for all.

The Chocolate Festival
An event that kicks off Parents and Families Weekend combines breast cancer awareness and wellness with delicious chocolate sampling and a silent auction. Proceeds benefit the Kay Yow Cancer Fund, breast cancer research and education, and the Women's Center.

Read to L.E.A.D.: Literacy and Social Justice Youth Development

A semester-long mentorship program between the NCSU Women's Center and community youth-serving organizations dedicated to improving the literacy of children and engaging mentors and mentees in intentional conversations about diversity and equity. This program provides high-impact learning for the NCSU community to become equity-minded practitioners, critical thinkers, and to make a life-long difference in the lives of low-income children.

Alternative Service Break (ASB) Trips to Atlanta (Fall) & Guatemala (Spring)

In partnership with CSLEPS and Multicultural Student Affairs, The Women's Center offers service-learning trips to Atlanta (civil rights and gender equity), and Guatemala (empowerment of women and girls).

Women of Welch (WOW) Village

In partnership with University Housing, the Women's Center facilitates a living and learning community in Welch residence hall. The Women of Welch (WOW) focuses on "transforming sisterhood into social justice" by improving self-awareness and fostering diversity and equity-minded individuals through unique programs, services, and relationship-building.

Interpersonal Violence Advocacy

The Women's Center provides advocacy services for students impacted by interpersonal violence (IPV) which encompasses things such as relationship violence, sexual assault and stalking. Potential services include crisis intervention, financial assistance, academic/housing advocacy, referrals and accompaniment to court, student conduct hearings and law enforcement agencies. The Women's Center also focuses on providing campus-wide outreach and education for students by offering trainings, workshops and planning large and small scale events focused on IPV.

The Movement Peer Educators

The Movement Peer Educators are a group of paid, trained peer educators who facilitate workshops on issues of Interpersonal Violence such as stalking, relationship violence and sexual assault. Peer Educators meet weekly to discuss current events, work on team bonding and facilitation skills, and learn more about IPV and the resources offered at NC State for survivors. The Movement also has the opportunity to work on planning both large and small scale events throughout the year such as Carry That Weight and SlutWalk: A Walk to End Victim Blaming.

For more information, please stop by our office, visit the Women's Center online (http://oied.ncsu.edu/womens-center) or call us at (919) 515-2012.

The University Career Development Center

The University Career Development Center’s mission is to assist students in developing their career goals and to help them devise strategies for achieving these goals. From first year students to graduate students, services are designed to meet the needs of students across all stages of career development. Career coaches are available to meet with students one-on-one or in group settings. Students are provided access to career related assistance ranging from resume development and interview strategies to job search techniques and experiential learning opportunities.

The Career Development Center’s online student job and experiential learning resource ePACK, allows students to post resumes, apply for Co-op’s, internships, and full-time jobs, sign up for job interviews, and view schedules of career-related events such as career fairs and employer information sessions. A wealth of career information is available on the Career Development Center’s website (http://careers.ncsu.edu).

The Career Development Center is located in 2100 Pullen Hall.

Counseling Center

The Counseling Center provides individual and group counseling for NC State students wishing for assistance with personal, academic or career concerns. Services are primarily short-term in nature and referrals are made as appropriate. Counseling staff includes psychologists, professional counselors, social workers, graduate interns and psychiatrists who are available to work with students with concerns such as anxiety, depression, relationship issues, substance abuse, test anxiety, time management, dissertation support, and choosing a career. All counseling is strictly confidential with exceptions noted on the CC website. In addition to counseling, workshops and support groups are offered throughout the year in a variety of areas such as time management, stress reduction, suicide prevention, and relationship skills. Please see our website for further information.

The Counseling Center is located on the 2nd floor of the Student Health Center, 2815 Cates Avenue. Appointments may be scheduled by coming by the Counseling Center during walk in hours daily as posted on our website. Emergency after-hours assistance is available by calling the Counseling Center at 515-2423 and selecting the Counselor on Call. Additional information about services can be found on the Counseling Center’s website (https://counseling.dasa.ncsu.edu).

The NC State Libraries

The NC State Libraries’ website (http://www.lib.ncsu.edu) is a rich source of information and serves as a gateway to resources and services.

The D.H. Hill Library is open 24 hours/day in the fall and spring semesters. Branch libraries include: Burlington Textiles Library, Harry B. Lyons Design Library, Natural Resources Library, and William Rand Kenan, Jr. Library of Veterinary Medicine.

The collection contains over 4 million volumes of books, bound journals, and government documents; approximately 63,000 print and electronic serials; over 5.4 million microforms; full-text databases in all disciplines and extensive digital collections; numerous video, audio, and multimedia titles; unique and rare materials in the Special Collections Research Center. The Libraries’ participation in the Triangle Research Libraries Network (TRLN) provides convenient access to the collections of Duke University, UNC-Chapel Hill, and NC Central University.

The library has approximately 270 public workstations and a full complement of equipment for audio, video, and digital resources. PC and Macintosh laptop computers, digital cameras, camcorders, GPS units, and digital audio players and recorders are available for loan.
The popular Learning Commons in D.H. Hill Library is a technologically-equipped space for both individual and group work. The library offers equipment and assistance for working with digital images and other materials. The Libraries has a variety of study spaces for groups and individuals.

The new James B. Hunt, Jr. Library (http://www.ncsu.edu/huntlibrary) on Centennial Campus is more than the 21st-century face of NC State. It’s a place where ideas become reality and bold ambition forges beautiful solutions to global challenges.

The Libraries’ website (http://www.lib.ncsu.edu) provides information about and access to many services, including reference assistance, interlibrary loan, and electronic reserves. Library Tools (http://www.lib.ncsu.edu/course) web pages are available for every course offered at NC State. These customized pages include e-reserves, article databases, librarian recommendations, citation tools, IM a Librarian for help, and more. The Libraries’ Course Books on Reserves program makes over 4,500 required texts available on Course Reserves each year.

Military and Veterans Resource Center

NC State Military and Veteran Services

104 Witherspoon Student Center
2810 Cates Ave.
Campus Box 7318
Raleigh, NC 27694-7318
Email: ncstatevets@ncsu.edu
Phone: 919-515-5041

The NC State University Military and Veterans Resource Center is the university’s centralized resource to coordinate integrated support to military-affiliated students. Our primary objective is to ensure that our veterans and military-affiliated students feel a strong sense of belonging to NC State.

We proudly serve all military-affiliated students, staff, faculty and retirees:

- Discharged and retired veterans
- Active duty military
- Members of the National Guard and Reserve Components
- Spouses and dependents of military and veterans
- Gold Star family members

Our goal is to ensure you are successful as you:

- Transition from the military to the campus;
- Persist to graduation; and
- Transition from NC State into your chosen career

Mission

NC State University is committed to educating, supporting, and honoring student veterans and their families by helping them acquire the knowledge and skills necessary to achieve their personal and professional goals.

NC State Bookstores

NC State Stores has been the authority on textbooks, school supplies, computers and apparel since our founding in 1954. We pride ourselves on ensuring students have access to the best prices and service to secure course materials through our price comparison tools and easy on-campus shopping. We also offer the most extensive collection of officially licensed merchandise available anywhere, featuring apparel from leading brands like Adidas, Southern Tide, Peter Millar, Vineyard Vines, Clinique and so much more.

Location

If you haven’t already visited our flagship location in Talley Student Union, get ready for an unparalleled Wolfpack shopping experience! Our space is brimming with fan gear, apparel, gifts, books, novelty items, school supplies, technology and more.

Wolfpack Outfitters also services our students on Centennial Campus with a smaller satellite location that carries books, school supplies, apparel and snacks. It is located in Wolf Ridge next to On the Oval Culinary Creations. Don’t see what you need? Just let the staff know and we’ll have it transferred from the main store the next day.

When you aren’t on campus, shop the online store (http://shop.bookstore.ncsu.edu).

Textbooks

Once your course registration is complete, log into MyPack Portal and head over to “View My Booklist.” From there, we take care of the rest. View all of your required and recommended course materials, compare prices with our online shopping tool, and place your order with peace of mind. We ensure you’ll have the right books for your courses, and we’ll have them waiting for you at move-in.

Like to shop around? NC State Stores prides itself on the value it provides, and it is backed up with pricing transparency. Before making your purchase, use the Bookstore’s online comparison tool to see how it stacks up against the competition; and when you’re ready to sell your books back at the end of the semester, visit the our website (http://shop.bookstore.ncsu.edu) to check their value before bringing them in.

Financial Aid and Scholarship Funds

Wolfpack Outfitters will defer payment of online and in-store textbook orders for students who receive financial aid or academic scholarship funds. These charges will be sent to the University Cashier’s office for processing upon disbursement of funds. Only items fulfilled by NC State Bookstores are eligible for this payment method at checkout. Students who receive athletic scholarships or sponsorship (VA, VR, WIA, Services for the Blind) should make all purchases in the store.

Laptops

Our Technology Department offers business class computers that meet the specifications for your area of study at NC State. We sell our recommended models with confidence because of their outstanding track record of reliability in the mobile classroom. All of our computers meet or exceed the university-set recommendations, and are guaranteed to last you through your four years of college.

By purchasing from the us, you are guaranteed to receive the convenience of full warranty support on campus.
NC State Dining

Relax. Refuel. Recharge! NC State Dining offers more than 35 locations to eat across campus, including all-you-care-to-eat dining halls, restaurants, cafes, and convenience stores, as well as a host of vending machines conveniently located across campus.

We have debuted a number of new dining locations over the past few years, including eight new venues in Talley Student Union and a variety of options at On the Oval on Centennial Campus. Our innovative dining program earned us the distinction of the 2016 Top 50 College Dining Experiences, Top 26 Healthiest Colleges, and Top 10 Gluten Free Accommodating Colleges in the United States. There’s never been a better time to dine at State!

NC State Dining hosts a number of theme meals and monotony breakers during the year, including our famous Ali Carolinas Meal, which features items grown or produced in North Carolina. We also host a number of cultural meals, too. Check out our special events calendar (http://www.ncsudining.com/university-dining-events) for more details.

Nutrition

NC State Dining understands the diverse nutritional needs of our campus population. To that end, we pride ourselves on offering a wide variety of options, including vegan and vegetarian as well as gluten- and lactose-free fare. Our website (https://dining.ncsu.edu/locations) provides nutritional information for all of our restaurants and dining halls, and each dining hall has a nutrition kiosk where visitors can check the daily menu for allergens and other key ingredients.

Our registered dietitian, Lisa Eberhart, is nationally recognized for her efforts to make NC State one of the best campuses known for its nutrition and wellness programs (http://www.ncsudining.com/campus-dining/healthwellness). She is available to assist with dietary restrictions and to provide nutritional or diet counseling. She also provides a number of learning opportunities throughout the year to help our campus stay fit and informed about how proper nutrition can improve energy levels and academic performance.

These efforts have helped us earn national recognition, most notably the first university to complete Michelle Obama’s Partnership for a Healthier America- Healthier Campus Initiative.

Meal Plans

While only first-year students living in University Housing are required to participate in a meal plan for two semesters, more than 5000 upper-class students registered for a meal plan last year because we serve great food and offer flexible, affordable options.

Our 2017-2018 meal plans (https://dining.ncsu.edu/meal-plan-options) are designed to cover the cost of meals and snacks in three different ways: Dining Hall Swipes, Meal Credits, and Dining Dollars.

• **Dining Hall Swipes**: Just one swipe at our dining hall locations and you can enjoy a full meal or a light snack, all with a single swipe.

• **Meal Credits**: Use Meal Credits to purchase a meal at one of our many restaurants or cafes. Meal Credits are also used to purchase a dining hall take-out meal. Meals Credits vary by location and only one Meal Credit can be used per meal period.

• **Dining Dollars**: Use Dining Dollars at convenience stores and vending machines, or to make small purchases at a restaurant or cafe in lieu of a Meal Credit.

The **Weekday, Everyday, and Deluxe Plans** include an all-access pass to the dining halls, plus Meal Credits for use in our restaurants and cafes. 100 Dining Dollars and dining hall guest meals are also included. With the all-access dining hall pass, students can access the dining halls as often as they like, as long as 30 minutes pass between swipes.

We also have a **150 Meals-per-Semester Plan** that can be used at any time in the dining halls or once per meal period in a restaurant or cafe, and includes 100 Dining Dollars. Our **Commuter/Apartment Plan** is for students who commute or live in on-campus apartments. It includes $750 Dining Dollars that can be used at any dining location and comes with a five percent discount at the register on all purchases.

Picking a Plan

Meal plan information will be mailed to you between May 1 and July 15, depending on when you make your commitment to attend NC State. Sign-up information will also be posted online in mid-April, and you’ll have an opportunity to hear from us and talk one-on-one during orientation.

We recommend you review the plans, then consider your expected daily travel and eating patterns once you’ve received your residence hall assignment and course schedule. Once you’ve picked a plan, register online (https://dining.ncsu.edu/meal-plan-options/meal-plan-signup) or complete the paper form you’ll receive in your packet before you arrive on campus this fall. You can then try out your plan and make any changes via our website prior to September 30. Be sure to re-evaluate for the spring semester to ensure your plan is the right one for you and make any changes by January 31.

We’re Here for You

We take pride in offering quality food and services designed specifically to meet the wants and needs of students. For more information, visit NC State Dining online (http://dining.ncsu.edu) or call 919.515.7012 (http://catalog.ncsu.edu/undergraduate/studentservices/universitydining/tel%28919)%29%20515%207012). Follow us on Facebook (https://www.facebook.com/ncstatediningpack), Twitter (https://twitter.com/ncstatedining) and Instagram (https://www.instagram.com/ncstatedining) for information on special events, featured menu items, cooking demos, and more.

Student Health

At NC State we believe a HealthySTATE of mind and body contribute to the overall success of our students. We strive to safeguard the health and wellness of students through a multi-pronged approach including health education, promotion of wellness and provision of medical care. Student Health Services, conveniently located on campus at the corner of Dan Allen Drive and Cates Avenue, offers non-urgent medical care to students as an outpatient center. We are staffed by board certified physicians, advanced practitioners (i.e. nurse practitioners, physician assistants), registered nurses and other medical support professionals.

To learn more about the many services and benefits we offer students, visit our website at https://healthypack.dasa.ncsu.edu or call our main number with questions at 919-515-2563.

Hours of Operation:
Student Health Services is open from 8 a.m. to 5 p.m. Monday, Wednesday, Thursday and Friday. To allow for staff development and departmental meetings, we open at 9:00 a.m on Tuesdays. We accept patients for care up to 4:20 p.m. In addition, we are open Saturday from 9 a.m. to noon during the fall and spring semesters (excluding breaks) for illness and injury - no appointment needed. Patient appointments are typically 20 minutes.

A nurse advice line is available at all other times to assure students receive qualified nurse and medical advice. During adverse weather, students should check the Student Health Services website, https://healthypack.dasa.ncsu.edu for any variance in operating hours.

**Summer session** hours are Monday through Friday, 8 a.m. to 5:00 p.m. with no weekend hours. We accept patients for care up to 4:20 p.m to provide sufficient time for you to see your healthcare provider. Patient appointments are typically 20 minutes.

**How to schedule an appointment:**

Appointments can be scheduled online or by calling the health center at (919) 515-2563.

**Charges:**

All registered students pay a health fee which provides access to care and covers most, but not all, office visits for provider services. There are charges associated with x-rays, lab tests, allergy injections, travel vaccines, physical therapy, massage, annual physicals, some office visits and specialty clinics. Students are responsible for the cost of prescriptions and over the counter medications /supplies available at the Student Health Pharmacy, as well as expenses incurred when referred to an off-campus laboratory, physician, hospital or pharmacy. Student Health Services will file insurance on behalf of the student for services received at Student Health. Charges not covered by insurance may be transferred to the student's account with University Cashiers Office. Check with us prior to your visit to determine if your insurance plan is considered in-network.

Student Health partners with several specialty groups to offer on campus care. Specialists include Dermatology, Orthopedics and Gastroenterology. Charges and insurance is billed by the specialty group and not Student Health. The student is responsible for making arrangements for payment with the specialty office.

Student Health, in partnership with Campus Smiles Dental Services, provides comprehensive dental care to students. Campus Smiles accepts most dental plans and will file your insurance for you. Cash discount pricing is also available. To make an appointment, contact Student Health and ask for the dental clinic. Two locations are available for your convenience - Main Campus and Centennial Campus.

**Staying Healthy and Well:**

A HealthySTATE of mind and body begins with the prevention of disease and reduction of risky behaviors. Our outreach health educators and Pack Peer Educators offer a variety of information, programs and services to students on issues facing today's young adults. Health topics include nutritional counseling, alcohol and drug education, stress management, healthy sexuality, women’s health, men's health and more.

Pack Peers is our student volunteer program that includes two tracks: Track I- Peer Education and Track II- Clinical Experience. Students interested in becoming engaged in our Pack Peer program should visit our website at https://healthypack.dasa.ncsu.edu for more information.

**Required Medical Insurance**

As mandated by the UNC System, NC State University requires all undergraduate students taking 6 or more credit hours to have and show evidence of a creditable health insurance policy. Students failing to provide proof of coverage by the published deadline each semester, will automatically be enrolled in and billed for the university-sponsored health insurance plan through Student Blue. Note: This is a University requirement.

The University-sponsored health insurance plan (Student Blue) has a robust set of benefits at an affordable premium. Each year, complete information is available to students at the start of the fall and spring semesters. For more information regarding the health insurance requirement and/or the University-sponsored health insurance plan, please see the information at: https://healthypack.dasa.ncsu.edu.

**Confidentiality:**

All health and medical information is kept secure and confidential and is not divulged to anyone without the express written consent of the patient as required by Federal law.

PLEASE NOTE: Parents must have the written consent of their student for the release of any protected health information (PHI). Guarantor of payment is not considered written consent for access to PHI.

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**Disability Services Office**

The Disability Services Office (DSO) facilitates accommodations and services for individuals with documented disabilities and serious medical conditions. Accommodations and services are rendered based on the individual’s documented needs and are determined through an interactive process. DSO will maintain appropriate confidentiality of records and communication regarding disability. To receive accommodations and services, please contact the DSO as far in advance as possible. The DSO office is located on the second floor of the Student Health Services Building, 2815 Cates Avenue, Suite 2221

Phone: voice - (919) 515-7653, TTY - (919) 515-8830, fax: (919) 513-2840

Email: disability@ncsu.edu

Visit Disability Services online (http://dso.dasa.ncsu.edu/)

**Medical Insurance**

NC State University requires all undergraduate students who are taking 6 or more credit hours, and are degree seeking students, to have and show evidence of a creditable health insurance policy or students will automatically be enrolled in and billed for the university-sponsored health insurance plan. This university-sponsored health insurance plan has a robust set of benefits at an affordable premium. Each year, complete information is available to students at the start of the fall and spring semesters. For more information regarding the health insurance requirement and/or the university-sponsored health insurance plan, please see the information on our website: https://healthypack.dasa.ncsu.edu/
Student Legal Services

University Student Legal Services (USLS) is a nonprofit corporation initiated by the Student Government at NC State which is funded by student fees. The purpose of the service is to provide education, advice and representation within the scope of the prepaid legal plan. The service's plan is registered with the North Carolina State Bar, the parameters of which are set by the students at NC State. The service is aimed at helping students resolve their legal problems with as little disruption as possible to their primary educational endeavors. This office promotes preventative law, enabling the students to make educated choices.

Website: studentlegal.dasa.ncsu.edu
Phone: 919.515.7091
Facebook: University Student Legal Services at NCSU

Transportation

Permit

All students (including Freshmen) living on or off campus may purchase a parking permit until all available student parking space is sold. Demand for permits does exceed supply. A nine-digit student ID is required; permits are purchased online at the Transportation website (http://www.ncsu.edu/transportation) beginning in early July based on credit hours; first-come, first-served. Permits are mailed to the address provided at time of purchase. Freshmen are most likely sold a perimeter/storage lot permit served by the university bus service, Wolfline. Instructions on the homepage above will guide you through the purchase process.

Parking Enforcement

Appropriate parking permits must be displayed between the hours of 7 a.m. - 5 p.m., Monday through Friday (resident areas are enforced until midnight, Monday through Thursday). Permits are not required after 5 p.m. in any unreserved space/lot. Never park in “24-hr. reserved,” accessibility spaces, fire lanes, or “no parking at any time” areas; pay close attention to signs.

Rental Car/Rideshare Options

Transportation offers alternatives to bringing a vehicle to campus through the Wolfline Transit System, GoPass (free local bus pass), WolfTrails (carpool), and ZipCar (hourly car rental). For more information on alternative transportation, please visit the Wolftrails website (http://www2.acs.ncsu.edu/trans/wolftrails/carpool.html).

Wolfline (Buses)

All Wolfline buses are accessible and equipped with the Transit Visualization System (TVS) which allows you to see your real-time bus location online. No fare is required. Service frequency varies, but generally daytime service is available every 10 - 15 minutes (including Saturday/Sunday daytime connection between libraries), as well as evening service until approximately 3 a.m. Wolfline buses operate every day classes are held and during exams. They provide intra-campus service, service to the McKimmon Center, park and ride lots, storage lots and surrounding areas along the routes. There is no bus service on official university holidays. A special holiday/break shuttle service operates the evening before classes resume after holidays and provides continuous shuttle service connecting storage lots and residence halls.

City/Regional Buses

The GoPass program allows students to ride city buses, GoRaleigh (formerly CAT) and regional buses, Goriangle (formerly Triangle Transit), for no fare. All that is needed to travel to your favorite Raleigh or Triangle destination is a GoPass swipe card. Order your free GoPass online at the Transportation website beginning in early July. You will need your valid student ID number to complete your online order; your pass will be mailed to you at the address specified at time of order.

Bicycles/Walking

Bicycling is also an inexpensive, healthy and environmentally-friendly way to travel to, from and around campus. Bike racks are conveniently located throughout our three campuses. Students are strongly encouraged to register their bicycles on-line at the website above or at Campus Police and Transportation Offices. For more information on bicycling and walking on campus (including a WalkTimes map), please visit Wolftrails online (http://www2.acs.ncsu.edu/trans/wolftrails/bike.html).

Transportation is located in Administrative Services I, 2721 Sullivan Drive, 7 a.m. - 5 p.m., (919) 515-3424.

University Recreation

University Recreation’s mission is to inspire a culture of wellness by providing quality, innovative and inclusive collegiate recreation programs, services and facilities that promote healthy, active lifestyles to enhance student success. University Recreation is proud to be a leader of wellness at NC State and has built a multifaceted approach to inspire and engage the entire Wolfpack community in healthy, activity living.

Group Fitness (https://recreation.dasa.ncsu.edu/fitness/group-fitness) provides more than 100 classes every week designed for every fitness level. Challenge yourself by taking a cycling, TRX®, yoga, BODYPUMP™, Zumba® or other fitness class formats to experience firsthand how we make fitness fun. Take your structured workout to the next level with Small Group Training where our coaches lead workshops on Olympic lifting, boxing and more.

Receive one-on-one attention from one of our nationally certified Personal Trainers. Learn how to exercise, improve performance, or establish fitness a goals.

Our Wellness (https://recreation.dasa.ncsu.edu/wellness-2) team offers health education programs for students and university groups. Learn stress management techniques, strategies to stay active at NC State and lifestyle modification tips from our team of experts. Sessions can be facilitated in Carmichael, residence halls, offices or other areas to meet the specific needs of a group.

Intramural Sports (https://recreation.dasa.ncsu.edu/sports/inntramural-sports) are perfect for those who are looking to compete against fellow NC State students in a variety of team sports, tournaments and special events such as flag football, basketball, soccer, softball, volleyball and some non-traditional sports like pool battleship and cricket.
If you want a more competitive sports experience, check out one of our Club Sports (https://recreation.dasa.ncsu.edu/sports/club-sports) teams that include but not limited to rugby, lacrosse, bass fishing, rowing and triathlon. These student-led organizations practice regularly and compete against other colleges and universities at local, state and national levels.

Outdoor Adventures (https://recreation.dasa.ncsu.edu/outdoor-adventures) offer students unique outdoor trips, educational clinics and the WolfWheels bike rental service. Students may also rent outdoor equipment from the Outdoor Adventures rental center and climb to new heights on the indoor climbing wall. Finally, challenge yourself or build teams through customized low and high-rope element programs at our Challenge Course located in Schenck Memorial Forest.

University Recreation employs more than 700 students annually in a variety of positions. Students enhance their development through practical application and learn transferrable skills that will prepare them for their future career.

Carmichael (https://recreation.dasa.ncsu.edu/facilities) is a 350,000 sq. ft. facility designed to help you achieve your recreation, fitness and wellness goals. Features include:

- Six Strength & Conditioning Centers (30,000 sq. ft.)
- Six Fitness/Activity Rooms
- Eleven Indoor Basketball/ Multipurpose Courts
- 25 Yard Pool and Dive Well
- 50 Meter Pool
- Indoor Climbing Wall
- Indoor Track
- 14 Racquetball Courts
- One Squash Court
- Personal Training Suite
- Men’s and Women’s Locker Rooms
- Single Occupant Locker Rooms
- Steam Room
- Sauna
- Equipment Checkout
- Day Use Lockers
- Social Lounges

University Recreation manages numerous outdoor facilities that promote healthy, active living.

-Miller Outdoor Recreation Field
-Method Road Recreation Complex
-12 Outdoor Tennis Courts
-Four Outdoor Basketball Courts
-Fit Ground Outdoor Functional Training Area
-Centennial Campus Recreation Fields
-Centennial Campus Disc Golf Course

Visit recreation.ncsu.edu to learn more.

**Wolfpack One Card**

Your Wolfpack One Card proves that you are one of the Pack and affords you a variety of services on campus:

- Access your meal plan
- Enter your residence hall or other secure areas
- Work out at the gym
- Check out books at the library
- Create and access your AllCampus debit account to make purchases at participating on-campus locations.

New students receive their card during orientation.

Students are encouraged to store their card in a safe and convenient location as they will use it often during the course of a day. Don’t hole punch it or tumble it in a dryer to extend the life of the card. Replacement cards are $20.

To report a lost or stolen card, call or visit the Wolfpack One Card office or go online (http://onecard.ncsu.edu). The office is located on the main level of Talley Student Union. You can also stop by to ask questions about the many features of the ID card during regular business hours: Monday - Friday from 8 a.m. - 6 p.m.

For more information, call us at 919.515.3090 or visit us online (http://onecard.ncsu.edu).
**Student Activities**

**Student Involvement**

Student Involvement supports students as they explore meaningful co-curricular experiences by providing resources, advising and programming. Student Involvement supports more than 600 student organizations including Student Government, the Union Activities Board, and all registered student groups.

Web: studentinvolvement.dasa.ncsu.edu

Twitter: @NCSUgetinvolved

Phone: 919.515.2797

**Student Government**

Student Government was founded in 1921 as a student-run organization that serves as the official voice of the student body. We attempt to better the student experience at NC State by functioning as a governing body and advocacy group. Involved in policy-making, adjudication, programming, lobbying, community services, and countless other activities, we work alongside administrators to address student concerns.

SG’s Four Branches include:

- **Executive Branch** - assists in implementing policies, creates and implements initiatives, and executes special projects of the Student Body President
- **Student Senate** - the 72-member body that establishes and recommends policies to the University administration, allocates the SG budget, and distributes funds to registered student organizations
- **Judicial Branch** - operates fairly independently, hearing cases involving student misconduct, including academic integrity violations
- **Board of Elections** - manages both the fall and spring elections for Student Government and specified Student Body officers by providing informative resources with a non-biased approach

Students have a voice in government through participation in campus-wide elections (by voting or running) or may apply to serve on the Conduct Board as well. For more information please visit Student Government's website (http://students.ncsu.edu).

**The Union Activities Board**

The Union Activities Board (UAB) is a student-directed programming network of committees that plan and implement a variety of programs for the campus community. The UAB is made up of 6 distinct committees including the Black Students Board, the Diversity Activities Board, the Films Committee, the Speakers and Professional Development Committee, the Concerts and Entertainment Committee and the Leisure and Recreation Committee. We also have a marketing team with graphic designers and a social media manager. You can visit them online at the UAB website (http://uab.ncsu.edu), friend them on the UAB Facebook page (http://www.facebook.com/NCStateUAB), Instagram, or follow them with the UAB Twitter feed (https://twitter.com/#!/UABncsu)!

**Fraternity and Sorority Life**

There are over 50 fraternities and sororities at NC State University, each founded to prepare students for society through a values-based fraternal experience. These fraternal values are summarized by our Community Pillars: Brotherhood, Scholarship, Service, Leadership, and Sisterhood. How organizations enact those values through membership, programs, and activities is what makes each organization unique. Fraternities and sororities provide opportunities to get involved, helping students on a large campus build a support network of peers that share similar goals and interests. Organizations challenge members to take on new responsibilities, develop their leadership potential, be active within the campus and surrounding communities, and adopt a commitment to volunteerism and civic engagement. Fraternities and sororities also provide their members with a unique lifetime membership, connecting them with local graduate and alumni chapters and national alumni groups well after graduation.

Approximately half of our chapters provide housing for their members with 16 chapters currently living in Greek Village on campus. The University, in partnership with our fraternities and sororities, has committed to redevelop Greek Village over the next 10 years. At completion, Greek Village will be home to over 35 different fraternities and sororities in a combination of homes, townhouses and apartments.

For more information on membership, educational programming, or service opportunities, visit the Department of Fraternity and Sorority Life’s website, the office in 5125 Talley Student Union, or call (919) 513-2910.

Website link: fsl.dasa.ncsu.edu

**Center for Student Leadership, Ethics, and Public Service (CSLEPS)**

The Center for Student Leadership, Ethics, and Public Service (CSLEPS) is a university department that provides unique learning opportunities that embody the value of leadership, service, responsible citizenship, and ethics. We envision fearless leaders who transform communities and forge a socially just world for all people.

CSLEPS offers opportunities including Alternative Service Break (ASB), the Leadership Development Series workshops, the Engaged Service Scholars Program, and other programs and initiatives focusing on local, national, and global social justice issues. We strive to help students become ethical and effective leaders and engaged citizens, while at NC State and beyond.

To learn more about CSLEPS, programs offered, and how to become involved, visit the Center for Student Leadership, Ethics, and Public Service in 4111 Talley Student Union or call (919) 515-9248.

Web: csleps.dasa.ncsu.edu

Twitter/Instagram/Facebook/Snapchat: @CSLEPS

**Arts NC State**

The six visual and performing arts programs of Arts NC State - Crafts Center, the Dance Program, the Gregg Museum of Art & Design, the Music Department, NC State LIVE and University Theatre – provide opportunities for our students and our community to explore, learn, create, and grow. Whether through academic courses, cutting-edge performances and exhibitions or the preservation of traditional crafts, Arts NC State educates our students for the 21st century while providing a living link to our rich cultural heritage. For additional information, please visit the ARTS NC STATE website (http://www.ncsu.edu/arts).
The Crafts Center

Explore your creative side. The Crafts Center provides NC State students with a comprehensive range of offerings including both classes and studio use. We are a place where creative skill and self-expression are fostered through the making and sharing of art and craft. Our facility houses studios supporting pottery, photography, wood, jewelry/metals, fibers, glass, lapidary, art-on-paper and even bike repair. Whether used for personal expression or in support of academic projects, our studios are well-equipped with cutting-edge technology. We are a place for making things.

Professional staff and crafts instructors provide quality technical advice and materials support. Mentorship thrives at the Center. With the intent of enhancing the quality of life, the Crafts Center reaches out through academic collaboration, support for student life, and partnerships with other arts organizations. Participation in associated crafts guilds that routinely meet at the Crafts Center provides NC State students a creative platform within the University and beyond.

For answers to your questions about the Crafts Center, please call 919.515.2457 or visit the Crafts Center website for our upcoming programming, calendar information, map & directions.

Dance Program

The NC State Dance Program gives students the opportunity to study dance through direct experience in choreography and performance. The program’s two student companies, the NCSU Dance Company and the Panoramic Dance Project, are open by audition. A vast array of classes, offered through the Master Class Series and the African Dance Master Class Series, are open to all NC State students, faculty and staff.

The Dance Program provides a rich training ground for choreographers through the study of composition, independent study, and guided choreographic projects. The Dance Program provides a creative environment rich in imagination, reflection, and the embodiment of ideas. As undergraduate and graduate students pursuing degrees in various fields, the dancers at NC State bring their diverse insights and experiences into the artistic process and contribute meaningfully to the art. The Dance Program’s three annual concerts are described below:

- **The Dance Program Fall Concert**: The Fall Concert features the choreography of current students who create work through independent study and through teacher guided, student choreographed collaborative projects (the Movement Studies Project and the Identity Projects); choreography by alumni; professional and other special projects. Both the NCSU Dance Company and the Panoramic Dance Project are represented on the Fall Concert.

- **NCSU Dance Company Concert**: Nationally acclaimed by the American College Dance Festival Association, the NCSU Dance Company performs a distinguished collection of modern dance for their annual concert. The program features premiere and repertory work created by the dance program directors and invited guest artists.

- **Panoramic Dance Project Concert**: For their annual spring concert, the Panoramic Dance Project performs a diverse range of dance styles, including modern, jazz, hip hop, African and Latin in choreographic work by the director, invited guest artists and student company members.

For more information, please contact 919.515.7034 or visit the Dance Program website.

Gregg Museum of Art & Design

The Gregg Museum of Art & Design is NC State’s collecting museum. It houses more than 32,000 examples of contemporary and historical ceramics and textiles, glass, furniture, photography, paintings and sculptures, ethnographic, folk and outsider art, and works on paper from every continent. These holdings augment an ongoing series of changing exhibitions, support university curricula across a wide range of course subjects, and enable direct research with significant objects. The Gregg’s collection, exhibitions, publications and programming provide the NC State community and the public with unique access to work in all these media.

At present, the Gregg Museum is temporarily sited at 516 Brickhaven Drive (near J.C. Raulston Arboretum) while ongoing fundraising and subsequent construction lead toward completion of its new galleries and storage facility near NC State’s Memorial Bell Tower.

Meanwhile, its exhibitions are presented in a variety of other venues on campus and in the surrounding community. To locate these, schedule tours or class visits, or to make arrangements to use the permanent collection, please call 919.515.3503 or visit the Gregg Museum online. Student internships for course credit are offered each semester.

Music Department

The Music Department offers both performing ensembles and academic courses for the music minor program, GEP and elective credit. Four minor emphases are offered: (1) Performance, (2) History, (3) Liberal Arts, and (4) Composition. The Department is also the first in the nation to offer a minor in Arts Entrepreneurship.

Academic courses include the History and Theory of Western Art Music, special topics such as Women in Music and Introduction to African American Music, and Introductory Music Appreciation courses. For full descriptions of the academic courses, consult the Music Department’s page in the NC State University Course Catalog. Contact 919.515.2981 or visit the Music Department’s website for audition information.

- **Performing Ensembles**. A wide variety of performing ensembles provide opportunities for students to develop both artistically and intellectually through applied music. Through performance, the ensembles play an important role in campus life, presenting public concerts and performing at official functions (both on and off campus) and athletic events. Performing ensembles receive one academic credit that may be used to satisfy free elective requirements in any academic major. Membership in all ensembles requires an audition with the instructor. See the Music Department’s website for audition information.

- **Choral Ensembles**. The Choral program offers students from all academic areas an opportunity to participate in the exploration and performance of the highest quality choral repertoire from all eras. The ensembles include State Chorale, Men’s Choir (Singing Statesmen), and Women’s Choir (Vox Accalia). Performance highlights have included concerts every semester, tours and occasional collaborations with other ensembles.
• NC State Pipes and Drums. Students may learn to play the bagpipes, an instrument known to many of North Carolina’s earliest settlers, in order to represent the University through this unique and distinctive medium. Pipes, drums, and other equipment are furnished. Beginning pipe and drum lessons are available to students without previous experience.

• Orchestras. The Raleigh Civic Symphony and Chamber Orchestra combine student and community musicians with professional leaders to present concerts of innovative programming on campus and in other Triangle area venues. Area professionals serve as concertmaster, principal cellist, and guest coaches, to provide high-level instruction and leadership to community and student players. Both orchestras are on the same artistic level and require an audition with the conductor.

• Athletic Bands. The Marching Band (Power Sound of the South) is active during football season, and the Pep Band is active during basketball season. Students must audition for a band and will be placed according to their ability and interest.

• Wind Ensemble. The Wind Ensemble meets both semesters. Students must audition for the ensemble and will be placed according to their ability and interest.

• Jazz Ensembles. The jazz program includes Jazz Ensemble I, Jazz Ensemble II and Jazz Combos. The jazz groups perform both on and off campus during the fall and spring semesters. Students must audition for a jazz ensemble or combo and will be placed according to their ability and interest.

• Piano. Beginning piano classes are offered to students from all academic areas for credit. No previous experience is required. Honors sections of class piano are available for beginning piano students who are music minors, or who qualify by departmental approval. Applied lessons are offered to advanced piano students who have passed an audition and are admitted to the music minor program in piano performance.

• Voice. A Vocal Techniques class is offered to beginning voice students for credit with instructor approval. Previous voice study is not required. Applied voice lessons are offered to advanced voice students who have passed an audition and are admitted to the music minor program in vocal performance.

NC State LIVE

Experience amazing performers from around the world! A typical NC State LIVE season features outstanding artists from a wide range of disciplines, including jazz, world music, modern and contemporary dance, drama and comedy. Discounted tickets are available to NC State students, faculty, and staff, as well as parents of current NC State students and members of the NC State Alumni Association. Contact: 919.515.3030 or visit the NC State LIVE website (http://www.ncsu.edu/centerstage).

University Theatre

University Theatre is the university’s volunteer student theatre, open to all NC State students. In main-stage shows, the summer TheatreFest, and other special productions, students present theatrical works that tell stories from different perspectives and in varied genres: classics and new works, comedy, drama, musical productions and more.

Participating both on stage and behind the scenes, students become part of the campus theatre community, learning new skills in the costume or scene shops, exploring their creativity in classes and workshops, developing new talents and finding new friends. Student theatre organizations include the honorary theatre fraternity Alpha Psi Omega.

University Theatre offers a minor in theatre, and academic classes open to all students in acting, directing, introduction to theatre, and all areas of technical theatre, including stagecraft, costume, make-up, lighting, and scenic design. Contact: 919.515.2405 or 919.515.3927 or visit the University Theatre website (http://www.ncsu.edu/theatre).

Ticket Central

Ticket Central serves as the centralized box office for the visual and performing arts programs at NC State. Ticket Central tickets events in a variety of performance venues including Titmus Theatre, Kennedy-McIlwhee Theatre, and the Talley Student Union. In addition to serving the six Arts NC State programs, Ticket Central provides ticketing services on a fee basis for many campus and community organizations.

The box office is currently located in the main lobby of Thompson Hall. Normal hours of operation are Monday-Friday Noon-6 PM. If there are performances during the week, the box office will remain open until curtain. On weekends with performances, the box office will open one hour prior to curtain. Hours vary during University holidays and during the summer. Tickets may be purchased in person, over the phone by calling 919. 515.1100, or online by visiting the Ticket Central website (http://www.ncsu.edu/ticketcentral).

Intercollegiate Athletics

Go Pack!

NC State has plenty school spirit - and some wonderful athletics programs (http://www.gopack.com) that make it all worthwhile! The university’s “Wolfpack” athletics teams are nationally recognized and enjoy a tradition of excellence as they compete in the prestigious Atlantic Coast Conference.

The athletics program is self-supporting and is operated primarily through gate receipts, radio and television revenues, NCAA distributions, student fees, and private donations. Funds for athletics grants-in-aid are provided through the North Carolina State Student Aid Association, also known as the Wolfpack Club.

Sports

The Department of Athletics conducts the university’s intercollegiate athletics program, which includes 22 varsity sports, 11 men’s, 11 women’s. The athletics program is administered by the Director of Athletics, Deborah A. Yow. The Council on Athletics is appointed by the Chancellor and serves in an advisory capacity to the Director of Athletics and the Chancellor.

Men’s varsity sports include soccer, cross country, and football in the fall; basketball, swimming and diving, indoor track, and wrestling in the winter; and outdoor track, golf, tennis, and baseball in the spring. Varsity sports for women include soccer, cross country, and volleyball in the fall; basketball, indoor track, swimming and diving, and gymnastics in the winter; and outdoor track, golf, softball and tennis in the spring. The co-ed rifle team competes during the winter.

Athletics Facilities

The Wolfpack’s football facility, Carter-Finley Stadium, had its permanent seating increased to 55,600 while the state-of-the-art 106,000-square-
foot Murphy Football Center was completed in 2003. Vaughn Towers, a
117,000 square-foot structure along the west grandstand of the football
stadium, opened for the 2005 season and houses 955 Club-level seats, 51
private luxury suites, a University Suite for the Chancellor, and a state-
of-the-art press box that seats up to 112 members of the media. The final
phase of the Carter-Finley Stadium renovations, the enclosure of the
north end zone, was completed prior to the beginning of the 2006 football
season.

The men's basketball team plays in the PNC Arena which seats 19,700.
Reynolds Coliseum (5,500) reopened in the fall of 2016 after undergoing
a $35 million renovation, and is the permanent home for NC State's
ROTC programs and women's basketball, gymnastics, wrestling and rifle.

A $5 million renovation of Doak Field at Dail Park (2,500), the university’s
baseball stadium, was completed in June 2004, along with construction
of the J.W. Isenhour Tennis Center with four indoor courts. The Dail Soccer
Field/Track Complex, which hosts the Den Track, (3,000) was redesigned
in 2007 to accommodate men’s and women's soccer and an adjacent women’s
softball complex. That facility re-opened in the spring of 2008.

The department’s administrative offices also were renovated during the
facilities upgrade. The Case Athletics Center, which formerly was the
primary location for the Department’s administrative and coaches' offices,
was converted to student services facility for student-athletes, housing
the Academic Support Program for Student-Athletes. The Wolfpack’s
athletics administrative offices and coaches’ offices for soccer, track
and cross country, and wrestling moved to the Weisiger Brown General
Athletics Facility. Coaches offices for women's basketball, softball and
gymnastics are located in Reynolds Coliseum. The football coaching
staff's offices are located on the top floor of the Murphy Football Center
at Carter-Finley Stadium. The tennis coaches have their offices at the
Wolfpack Tennis Complex. The baseball coaching staff’s offices are at
Doak Field at Dail Park.

The fundraising offices of the Wolfpack Club and the athletic
department’s marketing and ticket offices are located in the Palasades
Building near Carter-Finley Stadium, at 5400 Trinity Rd. (Suite
500), Raleigh, NC 27607. For ticket information call (919) 865-1510
or 1-800-310-Pack. The main athletic department receptionist:
(919) 515-2101. Visit the official athletic department website
(http://www.gopack.com) for complete information.

Campus Facilities

The Campus Cinema

The Campus Cinema, located in Witherspoon Student Center,
presents films ranging from independent works to the latest Hollywood
blockbusters in digital format with Dolby® Digital Surround Sound.
The Cinema is a fully functional movie theatre with 460 seats and a
concession stand offering freshly popped popcorn, one free popcorn
per person. Movie screenings are free to NC State and the general
public unless otherwise specified. Check out the cinema website at:
https://uab.ncksu.edu(films-schedule). If you desire any assistive devices,
services, or other accommodations to participate in these activities,
please contact the UAB Films Advisor at 919-515-5168.

Facilities

Carmichael Complex consists of Carmichael Gym, Carmichael
Recreation Center, Willis R. Casey Aquatic Center, Miller Fields, 12
tennis courts, and 8 basketball courts, which offer a wide variety of indoor
and outdoor fitness choices for students. Students may use the pools,
indoor track, courts, cardio equipment, the outdoor fields, and tennis
courts unless otherwise reserved for classes, events or maintenance.
The Carmichael Complex is home to University Recreation and the
Department of Health & Exercise Studies. For more information, please
visit the Carmichael Complex website (http://recreation.ncsu.edu/facilities/
carmichael) or call (919) 515-PLAY (7529).

Gregg Museum of Art & Design is NC State's collecting museum and
in Fall 2017 will occupy one of the newest buildings on campus. The
Gregg Museum will be located at the former chancellor’s residence at
1903 Hillsborough Street. During the construction, the Gregg Museum is
temporarily sited at 516 Brickhaven Drive (near J.C. Raulston Arboretum)
and its exhibitions are presented in a variety of other venues on campus
and in the surrounding community.

The Gregg Museum houses more than 32,000 examples of contemporary
and historical ceramics and textiles, glass, furniture, photography,
paintings and sculptures, ethnographic, folk and outsider art, and
works on paper from every continent. These holdings augment an
ongoing series of changing exhibitions, support university curricula
across a wide range of course subjects, and enable direct research with
significant objects. The Gregg’s collection, exhibitions, publications and
programming provide the NC State community and the public with unique
access to work in all these media.

To schedule tours or class visits, or to make arrangements to use the
permanent collection, please call 919.515.3503 or visit the Gregg Museum online (http://www.ncsu.edu/gregg).

Price Music Center (PMC) is the location for the Music Department
and its programs. Until 1965, the first Pullen Hall had been the original
music building, which, along with many band instruments, pianos, and
a music library, was destroyed by a student arsonist. Built in 1971, Price
Music Center is named to honor Percy Walter (Daddy) Price, the father of
today's musical organizations on campus and the University’s first music
director in 1923. The Center contains three large rehearsal halls, practice
rooms each with a piano available to any student, a digital piano lab, and
offices and classrooms. For more information, call 919.515.2981.

Talley Student Union (TSU) is the hub of student life on campus and
is the place to study, shop, dine and engage with your peers. Talley
Student Union is anchored with nine food venues, Wolfpack Outfitters,
the Woodward Student Involvement Center and Stewart Theatre. If
students are looking to connect with the arts, enhance their leadership
skills, or connect with peers, Talley Student Union is the place to start.
Students can even be part of the amazing student employment team that
operates the facility.

Program offices and service areas that can be found in the Talley
Student Union include: Arts NC State; Center for Student Leadership,
Ethics & Public Service; Fraternity and Sorority Life; GLBT Center;
Multicultural Student Affairs; Student Involvement; NC State Student
Centers Administration; Student Centers Board of Directors; Union
Activities Board; University Theatre; Women's Center; RAVE! Events;
Ticket Central; and University Graduate Student Association.

RAVE! Events: To reserve room in the Talley Student Union or to plan
your event, please visit R (http://campusenterprises.ncsu.edu/talley-
student-union) RAVE!'s website (https://campusenterprises.ncsu.edu/rave-
events) or contact RAVE! Events at 51-EVENT (513-8368).

Frank Thompson Hall is the location for University Theatre and the
Crafts Center. Built in 1925 as a gymnasium, Thompson Hall reopened
in Fall 2009 after an extensive renovation that was an extraordinary partnership between NC State students, private citizens, businesses and the extended NC State community.

Thompson Hall houses University Theatre’s full production activities, performances, and classes. Facilities include the Titmus Theatre, the Kennedy-McIlwee Studio Theatre, the costume shop, the scenic construction and paint shop, lighting and sound facilities, as well as rehearsal and classroom spaces. The renovation brought state-of-the-art technologies and improved accessibility to the building that now returns to its purpose as a hub of student activity.

Located on the ground floor of Thompson Hall, the Crafts Center offers eight technology-rich studios and specializes in classes and workshops in art, pottery, sculpture, weaving, fiber arts, photography, woodworking, glass, jewelry, lapidary, and more. For more than fifty years, the Crafts Center has provided a friendly learning environment for students and craftspersons of all levels. NC State’s Crafts Center is one of the finest university crafts programs in the country. Classes and studio use are available to NC State students, alumni, employees, and the general public.

For more information on these two programs, please visit the Arts NC State website (http://www.ncsu.edu/arts).

Witherspoon Student Center (WSC) currently houses the African-American Cultural Center, Student Government and Student Media which includes the offices of five student-run media organizations: Agromeck (yearbook); The Nubian Message and Technician (newspapers); Windhover (literary magazine); and WKNC FM 88.1 (radio station). Witherspoon includes two accessible balconies; one meeting room available by reservation through REM; the African-American Cultural Center’s Sankofa Room, Gallery and Library; and Campus Cinema, used for films, lectures, classes and special events.

**Student Media**

NC State students have the opportunity to produce and manage a variety of student-oriented media. By working with these media, students gain valuable co-curricular experience in sales, marketing, journalism, broadcasting, production, design, multimedia communication, leadership and management. NC State boasts five media outlets staffed by students and supported in large part by self-generated non-fee revenue, as well as a student-staffed Business & Marketing office which coordinates advertising sales, sponsorships and full-service marketing opportunities for all five media. Many staff positions are paid.

*Agromeck*, the university’s yearbook, provides a record in words and pictures of student and campus activities each year. Student staff members include photojournalists, writers, designers and editors, all with a common mission: documenting the history of the university from the student perspective. The *Agromeck* has received the nation’s highest awards for general excellence and photography as well as national Pacemaker and Crown awards. Visit the Agromeck online (http://www.ncsu.edu/agromeck/).

*Nubian Message* provides news and features about the African-American community at NC State, as well as coverage of regional, state and national issues of interest to our students. To find out more about this bi-weekly publication, visit the *Nubian Message* online.

*Technician*, the university’s oldest student newspaper, is published Monday through Friday when school is in session during the fall and spring semesters, and each Thursday during the summer. With a circulation of more than 11,000 daily and funded entirely through advertising income, the *Technician* has been recognized nationally with a CSPA Crown award and numerous state and national awards for design and photography. The *Technician* also maintains a significant online presence, including audio and video presentations, and is one of the nation’s most-visited student newspapers online. Visit the Technician’s website (http://www.technicianonline.com) and check it out!

*The Windhover*, the campus literary and visual arts magazine, is published each spring. As a showcase for NC State’s creative writers, poets, artists, photographers and musicians, it has received numerous national awards, including the Pacemaker from the Associated Collegiate Press and Gold Crown from the Columbia Scholastic Press Association. Visit the Windhover online (http://www.ncsu.edu/windhover).

*WKNC (88.1 FM)*, NC State’s student radio station, operates at 25,000 watts, for a potential effective audience of more than 1.2 million through its FM signal alone, and its online stream takes its programming to internet users all over the world. It employs a full complement of student managers, DJs, engineers, journalists and bloggers to provide programming 24 hours a day. It also sponsors a variety of live music events both on campus and at various music venues in Raleigh. Visit (and listen to!) WKNC online (http://www.wknc.org).

**Student Media’s Business & Marketing** office gives students interested in sales and marketing an opportunity to hone their skills while earning commission on every advertisement and sponsorship they sell. From print, to broadcast, to online sales, few (if any) organizations at NC State offer our students a better way to build their “real-world” business and marketing acumen as they work toward earning their degree from N.C. State. To find out more, visit the Business & Marketing Office online. (http://ncsu.edu/sma/advertising)

**The Student Media Board of Directors** is a way for students to get involved in the management of a large business operation with an annual total budget of nearly $1 million. The Board of Directors is the governing arm for all student media which use student fee monies to support their operations. Elections to the Board are held in the spring. Find out more about the Student Media Board online (http://www.ncsu.edu/sma).
Academic Policies and Procedures

It's important to be familiar with the policies and procedures that will be relevant to you as a student. NC State wants you to be able to access and understand these procedures as easily as possible, so the list below includes plain-language summaries of some of our most important and useful policies.

If you would like more information, please visit the Policies, Regulations, and Rules website (http://policies.ncsu.edu).

Policies about:

- Equal Opportunity and Non-Discrimination (p. 11)
- Getting Your Degree (p. 159)
- Courses and Grading (p. 156)
- Transfer and Exam Credit (p. 169)
- Student Records (p. 166)
- Academic Status (p. 167)
- Student Conduct (p. 169)

Courses and Grading

A good understanding of the policies regarding course credit and grading procedures is vital for successful students. The resources below can help you make sense of what you'll see on your NC State transcript:

- Classification of Students (http://catalog.ncsu.edu/undergraduate/academicpoliciesandprocedures/courses/classificationofstudents)
- Course Load (p. 156)
- Grading (p. 157)
- Credit-Only and Audit (p. 156)
- Repeating Courses (p. 158)

Course Load

Undergraduate Degree Students

The maximum course load for undergraduate degree students is 21 credit hours a semester and two courses plus a health and exercise studies course in a summer session. Undergraduate students who wish to register for more than 18 hours during the fall or spring semester must obtain approval from their academic advisor. Students who wish to register for more than 21 hours during the fall or spring semester must complete a Schedule Revision Form. Schedule Revision Forms are available from the student's departmental office. First semester freshmen with admissions indices less than 2.000 and continuing students with a grade point average less than 2.000 should be advised to carry no more than 16 credit hours in a semester.

The minimum course load for full-time undergraduate degree students is 12 credit hours, except in their final semester when a lesser number may be taken if that is all the student needs to fulfill the requirements for a degree. In order to receive financial aid, a student must meet the minimum course load requirements of the appropriate funding agency. In addition, students who drop below 12 credit hours may not be eligible for medical and dental insurance on their parent’s insurance policies.

Undergraduate students wishing to audit a course before or after taking it for credit must have the approval of their advisor and of the department offering the course. Auditors are expected to attend class regularly. The degree to which an auditor must participate in class beyond regular attendance is optional with the instructor; any such requirements should be clearly explained in writing to the auditor at the beginning of the semester. Should the instructor conclude that poor attendance has resulted in an auditor’s gaining little from the course, the instructor should mark NR (no recognition will be given for an audit) on the final grade report. Students who have taken a course for audit may, with their advisor’s approval, enroll in the course for credit during a subsequent semester or summer session. For tuition cost purposes, audits are treated as full credit value. For all other purposes, hours of audit do not count in calculating undergraduate course loads.

The maximum course load for undergraduate degree students is 21 credit hours a semester and two courses plus a health and exercise studies course in a summer session. Undergraduate students who wish to register for more than 18 hours during the fall or spring semester must obtain approval from their academic advisor. Students who wish to register for more than 21 hours during the fall or spring semester must complete a Schedule Revision Form. Schedule Revision Forms are available from the student’s departmental office. First semester freshmen with admissions indices less than 2.000 and continuing students with a grade point average less than 2.000 should be advised to carry no more than 16 credit hours in a semester.

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Undergraduate Studies Students (UGS)

The maximum course load for UGS students is 8 credit hours in a regular semester or summer session.

Post-Baccalaureate Students (PBS)

The maximum course load for PBS students is 8 credit hours in a regular semester or summer session. Individuals who are employed full-time should limit their registration to one course per semester or summer session.

Cooperative Education Students

Students in the Cooperative Education Program who are enrolled in a cooperative education course (i.e. COP 100) during the semester or summer in which they are on a work assignment are certified by the University Registrar to be full-time students even though academic credit is not granted for the cooperative education experience.

Graduate Degree Students

The maximum course load for graduate degree students is 15 credit hours in a fall or spring semester and 6 credit hours in a summer session, for full-time students not holding assistantships. Advisors should refer to the Graduate Catalog for maximum course loads for students on assistantships.

The minimum course load for full-time graduate students in defined in REG 02.15.05 - Graduate Registration and Residence Requirements (https://policies.ncsu.edu/regulation/reg-02-15-05).

REG 02.20.05 - Course Load (https://policies.ncsu.edu/regulation/reg-02-20-05) is available to view in full on the University's Policies, Regulations and Rules website.

Credit Only and Audit

Audits (Undergraduate)

AU-Audit. Given in recognition of successful completion of a course audit.

NR-No Recognition. Given for unsuccessful completion of a course audit.

Undergraduate students wishing to audit a course before or after taking it for credit must have the approval of their advisor and of the department offering the course. Auditors are expected to attend class regularly. The degree to which an auditor must participate in class beyond regular attendance is optional with the instructor; any such requirements should be clearly explained in writing to the auditor at the beginning of the semester. Should the instructor conclude that poor attendance has resulted in an auditor’s gaining little from the course, the instructor should mark NR (no recognition will be given for an audit) on the final grade report. Students who have taken a course for audit may, with their advisor’s approval, enroll in the course for credit during a subsequent semester or summer session. For tuition cost purposes, audits are treated as full credit value. For all other purposes, hours of audit do not count in calculating undergraduate course loads.
Note: Veterans benefits are governed by Veterans Administration regulation concerning audits. Public Law 94502 (G.I. Bill) and Public Law 64 (sons and daughters of deceased or disabled veterans) consider only courses being taken for credit when determining a student’s course load for benefit purposes. For information, contact Veterans’ Education, 1000 Harris Hall, (919) 515-3048.

REG 02.20.04 - Audits (https://policies.ncsu.edu/regulation/reg-02-20-04) is available to view in full on the university’s Policies, Regulations and Rules website.

Credit Only (Satisfactory/Unsatisfactory)

Each undergraduate student has the option to count toward graduation requirements a maximum of 12 semester hours in the category of credit-only courses (exclusive of Health and Exercise Studies (HES) activity courses and other courses authorized to be graded on Satisfactory/Unsatisfactory basis). The student may select as credit-only any course offered by the university except those in Military Science, Naval Science, and Aerospace Studies. Students should check with their advisor before taking a course in their major, minor, General Education Program (GEP) or similar categories in the credit only status to determine if the course will count toward the major, minor, or GEP. The selected courses must be included under the free elective category of the specific curriculum in which the student is enrolled. The student will be responsible for attendance, assignments, and examinations.

The student’s performance in a credit only course will be reported as S (satisfactory grade for credit-only course and given when course work is equivalent to C- or better) or U (no credit grade for credit-only course). The grade for a credit only course will have no effect on the student’s Grade Point Average. The course and its grade will be counted in the calculation of eligibility for the Semester Dean’s List, which requires either twelve hours or fifteen hours of course work for which grade points are earned.

Non-degree students may take on a credit-only basis for any course for which they satisfy prerequisites. Students should be aware that many graduate and professional schools evaluate credit-only courses for which they satisfy prerequisites. Students should check with their advisor before taking a course in their major, minor, General Education Program (GEP) or similar categories in the credit only status to determine if the course will count toward the major, minor, or GEP. The selected courses must be included under the free elective category of the specific curriculum in which the student is enrolled. The student will be responsible for attendance, assignments, and examinations.

The student’s performance in a credit only course will be reported as S (satisfactory grade for credit-only course and given when course work is equivalent to C- or better) or U (no credit grade for credit-only course). The grade for a credit only course will have no effect on the student’s Grade Point Average. The course and its grade will be counted in the calculation of eligibility for the Semester Dean’s List, which requires either twelve hours or fifteen hours of course work for which grade points are earned.

REG 02.20.15 - Credit-Only Courses (https://policies.ncsu.edu/regulation/reg-02-20-15) is available to view in full on the university’s Policies, Regulations and Rules website.

Grading

Grading Scale and Grade Points

<table>
<thead>
<tr>
<th>Grade</th>
<th>Definition</th>
<th>Grade Points per Credit Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>Excellent</td>
<td>4.333</td>
</tr>
<tr>
<td>A</td>
<td></td>
<td>4.000</td>
</tr>
<tr>
<td>A-</td>
<td></td>
<td>3.667</td>
</tr>
<tr>
<td>B+</td>
<td>Good</td>
<td>3.333</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td>3.000</td>
</tr>
<tr>
<td>B-</td>
<td></td>
<td>2.667</td>
</tr>
<tr>
<td>C+</td>
<td></td>
<td>2.333</td>
</tr>
<tr>
<td>C</td>
<td>Satisfactory (&quot;Passing* for graduate students)</td>
<td>2.000*</td>
</tr>
</tbody>
</table>

*For the most current information regarding this regulation, please view the full regulation (http://policies.ncsu.edu/regulation/reg-02-50-03).

Grade Point Average

The number of credit hours attempted in a semester or summer session (for which grades of A, B, C, D (including plus/minus), or F are received) is divided into the total number of grade points earned to arrive at the Grade Point Average (GPA). The Grade Point Average will be calculated to three decimal points to a maximum of 4.000.

For example, if a student takes 16 credit hours, earning an A in two 3-credit courses, a B in one 3-credit course, and a B in one 2-credit course, a C in a 3-credit course, and an F in a 2-credit course, the grade point average would be:

Example GPA Calculation (45)

- 6 (credits of A) x 4 (grade points per credit hour) = 24
- 5 (credits of B) x 3 (grade points per credit hour) = 15
- 3 (credits of C) x 2 (grade points per credit hour) = 6
- 2 (credits of F) x 0 (grade points per credit hour) = 0

The total number of grade points earned (45) divided by the number of credit hours attempted (16) equals the grade point average, in this case 2.813.

Grading Guidelines

All instructors at NC State use the plus/minus grading scale in their courses. The plus/minus grading scale does not apply to courses that are taken on a pass-fail basis.

Students enrolled in any section of a multiple section course in which the material, the sequencing of its treatment, and the examination are common to all sections should be graded on the same scale.

The following grades are not used in the calculation of grade point averages:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Satisfactory (Credit-only) some courses are only available as S/U</td>
</tr>
<tr>
<td>U</td>
<td>Unsatisfactory (Credit-only)</td>
</tr>
<tr>
<td>CR</td>
<td>Credit by Examination or Advanced Placement</td>
</tr>
<tr>
<td>IN</td>
<td>Incomplete (Student works with instructor but instructor's decision)</td>
</tr>
<tr>
<td>LA</td>
<td>Temporarily Late (Instructor posts grades after deadline)</td>
</tr>
<tr>
<td>AU</td>
<td>Audit</td>
</tr>
<tr>
<td>NR</td>
<td>No Recognition Given for Audit</td>
</tr>
<tr>
<td>W</td>
<td>Withdraw or Late Drop</td>
</tr>
</tbody>
</table>

See following section on description of letter grades.
Description of Letter Grades

D - Marginal. This grade is used to recognize that a student's performance was marginal but clearly better than that of students who receive an F.

F - Failing. This grade is used to indicate that the student has failed the course and will not receive any credit for the course.

S - Satisfactory. This grade is used as a passing grade to be awarded only when the quality of the student's work is judged to be C- or higher level. It is used as the passing grade for students who are taking free elective courses under the credit-only option, and for courses designated as pass/fail courses for grading purposes. It may also be used for certain courses such as orientation courses, seminars, and research problems, in which regular grades are not appropriate. Students should check with their adviser before changing a course to S/U status as it may affect graduation requirements.

U - Unsatisfactory. This grade is used to indicate that the student is not to receive credit for a credit-only or other course for which the passing grade would be S (Satisfactory).

CR - Credit. This grade is used by the registrar to indicate course credit received by examination or advanced placement as certified by appropriate departments or colleges. This grade shall be awarded only when the advanced placement testing indicates that the quality of the student's work in the course would have been expected to be of C- or higher level.

IN - Incomplete. This grade is used as a temporary grade. At the discretion of the instructor, students may be given an IN grade for work not completed because of a serious interruption in their work not caused by the student's negligence. An IN must not be used, however, as a substitute for an F when the student's performance in the course is deserving of an F. An IN is only appropriate when the student's record in the course is such that the successful completion of particular assignments, projects, or tests missed as a result of a documented serious event would enable that student to pass the course. Work undertaken to make up the IN grade should be limited to the missed work.

An IN grade must be made up by the end of the next regular semester (not including summer sessions) in which the student is enrolled, provided that this period is not longer than twelve months from the end of the semester or summer session in which the work was due. In the event that the instructor or department offering the course is not able to provide a student with the opportunity to make up the incomplete work by the end of the next regular semester in which the student is enrolled or within twelve months, whichever is shorter, the instructor or department offering the course must notify the Department of Registration and Records of the date of the extended deadline for removing the IN grade.

Any IN grade not removed by the end of the next regular semester in which the student is enrolled or by the end of twelve months, whichever is shorter, or by the extended deadline authorized by the instructor or the department offering the course and recorded by the Department of Registration and Records will automatically become a Failing (F) grade and will count as a course attempted.

Students should not register again for courses in which they have IN grades; such registration does not remove IN grades, and the completion of the course on the second occasion will automatically result in an F for the incomplete course.

When a graduating senior received an IN, the following procedures apply:

1. If the course is needed for graduation, the student will not be allowed to graduate until the work has been made up.
2. If the course is not needed for graduation, the college dean must notify, in writing, the Department of Registration and Records either
   (a) That the course and the IN grade are to be deleted from the student's records
   (b) Or that permission has been given for the IN to remain and that a deadline has been established for the completion of the course. In the event that the course is not completed satisfactorily, the college dean shall notify, in writing, the Department of Registration and Records that the course and the IN grade should be deleted from the student's record or that the IN should be changed to F.

LA - Temporarily Late. An emergency symbol to be used only when grades cannot be reported on time by the teaching department or the instructor. The LA differs from the IN grade in that the student receiving the LA has completed the work of the course including the examination. The LA should not be used by a teaching department or the instructor unless it is absolutely necessary. When it is used the following procedure applies:

1. Grade Submission must be entered at the regularly scheduled time with the LA clearly indicated; and
2. A Grade Change Report form must be secured from the Department of Registration and Records, completed, and returned at the earliest possible time and not later than 15 days after the final examination.

The semester grade reports of those students who receive an LA will not be complete. This situation often causes students to be uninformed as to their academic eligibility and as to the correctness of their schedule for the following semester.

W- Withdrawal/Late Drop. Used on student's grade reports and transcripts to indicate all courses for which they have received official approval to drop or from which they have received official approval to withdraw after the deadlines for dropping.

Grade Reports

Grades are posted online when instructors submit them in MyPack Portal or to the Department of Registration and Records. Students may access term grades via MyPack Portal (https://mypack.ncsu.edu) - Requires your Unity ID and password.

Students may come in person to the Department of Registration and Records, 1000 Harris Hall, and request a printed copy of grades for their last enrolled term. The student must show a picture ID to receive grades. Office hours are 8:00 a.m. to 5:00 p.m., Monday through Friday.

Repeating Courses

Course Repeat Policy

Students who repeat a course, regardless of the grade previously made, will have both grades counted in their cumulative grade point average.
An exception is the Grade Exclusion Policy as described in the section following this one.

- Undergraduate students may be allowed as many semester hours as are appropriate in the departmental curriculum for courses that are titled seminar, special topics, independent study or research (usually numbered 490-499 or 590-599) and cover topics different from those studied when the courses were taken previously. Unless a course satisfies one or the other of the above conditions, the semester hours will be counted only once toward the number of hours required for graduation even though students repeat and pass the course both times.

- With the exception of seminar, special topics, independent research courses as described in the above bullet, the advisor’s approval is required for students to repeat any course previously passed with a C- or better; no approval can be given for a grade of A or B. Nor will it be given when: students wish to repeat a lower division course that they have passed with a grade of C- or better after having successfully completed; students wish to take an introductory course after they have successfully completed an advanced course dealing with similar material.

Undergraduate students may repeat a course for credit once without permission if the previous attempt was completed with a grade of D+ or less. Students must have permission from the Dean of their college to attempt a course for credit more than twice.

- Students must not register again for any courses in which they have IN grades; such registration does not remove IN grades; and the completion of the course on the second occasion will automatically result in an F for the uncompleted course.

For the most current information regarding this regulation, please view the full regulation (http://policies.ncsu.edu/regulation/reg-02-20-06).

Undergraduate Grade Exclusion

The undergraduate grade exclusion policy is one of forgiveness that helps NC State undergraduate students maintain good academic standing. Undergraduate students may select up to two NC State courses with posted letter grades of C- or below to be excluded from calculation of their cumulative grade point average. Unsuccessful audits or credit-only attempts are not eligible for exclusion.

Once a grade exclusion is applied to a course, the grade points and the credit hours attempted and earned on the course will be removed from the calculation of the cumulative grade point average and from the calculation of the total hours attempted. The course title and grade for the course will be shown on the official transcript with a notation to indicate the grade was excluded from the computation of the cumulative grade point average.

Effects

- Grade exclusions will result in a recalculation of academic standing. Use of a grade exclusion does not retroactively change the status of the student’s semester academic honors or result in a refund of tuition or fees.

- Students should be aware that many graduate and professional schools recalculate grade point averages in the process of considering an applicant for admission to such programs. This recalculation may include restoring the grades and cumulative grade point average effects of courses to which a grade exclusion has been applied.

Eligibility

1. Undergraduate students may select up to two NC State courses with posted letter grades of C- or below to be excluded from calculation of their cumulative grade point average. Unsuccessful audits or credit-only attempts are not eligible for exclusion.

2. Grades excluded under previous university regulations (such as First Year Course Repeat or Course Repeat Without Penalty) count toward the maximum two courses allowed for exclusion.

3. Grade exclusions must be posted prior to a student applying for graduation. Grade exclusions cannot be invoked after a baccalaureate degree has been conferred upon the student by NC State.

4. Once a grade exclusion is posted, the student cannot remove the exclusion or change it to another course at a later date.

5. Grade exclusions cannot be applied to courses in which the student was found to have committed academic misconduct.

Procedures

Grade exclusions can be applied via a self-service tool in MyPack Portal. Students can learn how to apply Grade Exclusions by viewing a tutorial online (https://ncsu.service-now.com/kb_view.do?sysparm_article=KB0011752).

Getting Your Degree

NC State is committed to providing students with the information they need to complete their degree programs in a timely manner. Please review the resources provided here regarding policies and procedures relevant to obtaining your degree from NC State:

- Academic Advising (p. 159)
- General Education Program Requirements (p. 160)
- Satisfactory Academic Progress (p. 166)
- Adding or Changing Your Program (p. 160)
- Graduation Requirements (p. 165)

For more information about planning your degree, visit the Student Services Center website. (https://studentservices.ncsu.edu/your-degree)

Academic Advising

Most regularly enrolled students are assigned for academic advising to a faculty member who is normally a member of the department, which is, or is most likely to become, the student’s major department. Students who are admitted into programs such as Exploratory Studies (formerly the First Year College) will be advised by professional advisors in those programs who will aid the students in the process of selecting an appropriate major.

Responsibilities of the Student

Students have the primary responsibility for planning their individual programs and meeting graduation requirements. This involves keeping up-to-date with university, college, and department curricular requirements through materials available from the advisors or departmental coordinators of advising; keeping informed of academic deadlines and changes in academic policies; and consulting with the advisor or departmental coordinator of advising during each registration period, following notification of academic warning status, and at other
Responsibilities of the Advisor

Although students have the primary responsibility for planning their programs, advisors are expected to:

• be available for conferences at appropriate times and places about which their advisees have been informed;
• provide accurate information about academic regulations and procedures, course prerequisites, and graduation requirements;
• assist students in planning academic programs suited to their interests, abilities and career objectives;
• discuss with their advisees appropriate course choices in fulfilling curriculum requirements as well as possible consequences of various alternative course choices;
• inform their advisees when the advisee’s proposed course selections conflict with university academic or curricular regulations;
• assist advisees with following proper procedures for such things as Progress Toward Degree and the possible consequences of changing a letter graded course to a pass/fail status without speaking with an advisor, exceptions to the course drop deadlines, auditing a course before or after taking it for credit, taking a course under the credit by examination policy, registering for 19 or more credit hours, registering for inter-institutional courses, the availability and rules for the First Year Course Repeat Policy, and referring their advisees for special testing or counseling as needed;
• assist their advisees in considering the appropriateness of academic adjustments where these become necessary in cases of serious injury or illness, or unforeseen personal hardships.

Responsibilities of the Coordinator of Advising

Each college or department has a coordinator of advising and teaching who is responsible for: assigning, training, and supervising faculty and professional advisors; providing up-to-date, printed course and curriculum information for advisors and students; reassigning to another advisor any student who requests reassignment, assisting any student who wants to major in the coordinator’s area of study, but is ineligible at the time to transfer into it. Students in this category keep their advisor in the department in which they are enrolled, but consult additionally with the coordinator of advising and teaching for the department offering the curriculum in which they wish to enroll. Whenever appropriate, the coordinator will advise students that they should consider alternative curricula and refer the students to Academic Advising Services (http://advising.ncsu.edu). (https://advising.dasa.ncsu.edu)

Adding or Changing a Program

Adding a Major (Double Degree)

Students may pursue more than one bachelor’s degree while at NC State. Students are admitted to one program upon admission to the University. After satisfactorily completing 12 graded credit hours, they can apply to add an additional degree program. All academic requirements for both degrees must be satisfied, and by working with academic advisors in both programs students can maximize their course choices to take advantage of where requirements overlap. To apply to add an additional degree, students must submit a Change of Degree Application (CODA) (https://go.ncsu.edu/coda). Once the required coursework is complete, the degrees may be awarded at the same or at different commencement exercises.

Changing a Major / Change of Degree Application (CODA)

To apply to change to a major, a student must have attempted twelve or more graded hours at NC State, and have satisfied the transfer requirements for a specific major as listed on the CODA website (https://go.ncsu.edu/coda).

CODA Process

Undergraduate students wishing to change from one major to another should:

1. Visit the CODA website (http://go.ncsu.edu/coda) to check requirements for their intended major.
2. Check CODA application deadlines.
3. Submit an online CODA application for the intended major.

CODA applications are accepted throughout the year and will be reviewed following each deadline. Candidates who meet the Preferred Qualifications for their major have a higher probability of being approved for transfer. All admission is competitive and based on academic record and space availability in the intended college. Meeting the preferred qualifications does not guarantee admission.

For academic advising purposes, students accepted to a new program are considered to be in the new plan once the official major change is posted.

REG 02.65.03 - Intracampus Transfers (http://policies.ncsu.edu/regulation/reg-02-65-03) is available to view in full on the University's Policies, Regulations and Rules website.

General Education Program

General Education at NC State provides the opportunity for a broad and informed understanding of the world, offering our students the foundation for rich and productive lives. General Education is valuable for students because logical and creative thinking are fundamental to improving the human condition; because a respect for the value of diversity and an understanding of human history and cultures are essential to true citizenship; because the development of global knowledge has become increasingly important in response to international interdependence; because knowledge of science and the ability to apply scientific reasoning provide the basis for an appreciation of the workings of the universe and the richness, variety, and ecological interconnectedness of the world around us; because well-considered moral, philosophical, aesthetic, and intellectual convictions are necessary for contributing to human thought and achievement; because effective communication is central to productive engagement in academic, professional, and civic communities; because an ability to understand and evaluate the interaction among science, technology, and society is important in a world that is changing through technological innovation and scientific discovery; and because the development of attitudes and skills for a healthy life is essential to social, mental, and physical well-being. For the most current information available, please see the GEP website (https://oucc.dasa.ncsu.edu/general-education-program-gep).
Rationale: If a student changes a General Education course except for HES courses from a letter grade to credit-only (S/U), then the course will not satisfy the GEP requirements. Consult your academic advisor if you have questions.

**Mathematical Sciences**

**Rationale:**
A logical approach to problem solving is important for successful functioning in society. It is also important that students be able to formulate models, be critical consumers of quantitative information, communicate mathematically and solve problems.

**Objectives for courses in the category of Mathematical Sciences:**
Each course in the Mathematical Sciences category will provide instruction and guidance that help students to:

1. improve and refine mathematical problem-solving abilities; and
2. develop logical reasoning skills.

**Mathematical Sciences Requirement: (6 credit hours)**
A total of six credit hours from the university approved GEP Mathematical Sciences course list. At least one course must have an MA or ST prefix.

**Natural Sciences**

**Rationale:**
The natural sciences pursue basic questions about the workings of the universe, and the richness, variety and interconnectedness of the world around us. Students today are exposed to an increasing volume of information, from a large variety of sources, in diverse and changing formats. Training in the natural sciences is essential to help students develop skills to distinguish between testable and un-testable ideas, recognize scientifically valid tests of theories, and understand how information relates to those tests. By studying the natural sciences, students learn to reason both inductively and deductively, develop and test scientific hypotheses, and understand the value and limitations of scientific studies. The development and application of new technologies require scientifically literate citizens who can understand technological issues and evaluate the role of science in society's debate of those issues.

**Objectives for courses in the category of Natural Sciences:**
Each course in the Natural Sciences category will provide instruction and guidance that help students to:

1. Use the methods and processes of science in testing hypotheses, solving problems and making decisions; and
2. Make inferences from and articulate scientific concepts, principles, laws, and theories, and apply this knowledge to problem solving.

**Natural Sciences Requirement: (7 credit hours)**
A total of seven credit hours from the university approved GEP Natural Sciences course list including at least one laboratory course or course with a laboratory.

**Humanities**

**Rationale:**
The humanities comprise the subjects and disciplines that use various models of rational inquiry to understand human nature and experience, organization and change in human societies, the nature of the world, and rational inquiry itself. An education in the humanities and social sciences requires reading significant works, gaining an exposure to a variety of methodologies, and learning to apply these in written exposition. An education in the basic humanistic disciplines is necessary to become a citizen with a broad knowledge of human cultures and with well-considered moral, philosophical, aesthetic, and intellectual convictions.

**Objectives for courses in the category of Humanities:**
Each course in the Humanities category will provide instruction and guidance that help students to:

1. Engage in the human experience through the interpretation of human culture; and
2. Become aware of the act of interpretation itself as a critical form of knowing in the humanities; and
3. Make academic arguments about the human experience using reasons and evidence for supporting those reasons that are appropriate to the humanities.

**Humanities Requirement: (6 credit hours)**
A total of six credit hours from the university approved GEP Humanities course list. The selected courses must be from two different disciplines.

**Social Sciences**

**Rationale:**
The study of social sciences enables students to understand individual and collective human behavior by exploring meaning within a variety of social, cultural, political, and economic contexts, analyzing the structures within which human goals are established and human choices are made, and applying theoretical and empirical models to specific cases.

**Objectives for courses in the category of Social Sciences:**
Each course in Social Sciences category will provide instruction and guidance that help students to:

1. Examine at least one of the following: human behavior, culture, mental processes, organizational processes, or institutional processes; and
2. Demonstrate how social scientific methods may be applied to the study of human behavior, culture, mental processes, organizational processes, or institutional processes; and
3. Use theories or concepts of the social sciences to analyze and explain theoretical and/or real-world problems, including the underlying origins of such problems.

**Social Sciences Requirement: (6 credit hours)**
A total of six credit hours from the university approved GEP Social Sciences course list. The selected courses must be from two different disciplines.

**Introduction to Writing**

**Rationale:**
Writing is a powerful way of understanding ourselves and the world in which we live. It is through writing that the various disciplines and professions define the knowledge and methodologies that characterize
them. Mastery of writing and information skills is central to engaging in the productive life of academic and professional communities.

Objectives for courses in the category of Introduction to Writing:
Each course in this category will provide instruction and guidance that help students to:
1. Write effectively in specific situations, which may include various academic, professional, or civic situations, and
2. Understand and respond appropriately to the critical elements that shape written communication situations, such as audience, purpose, and genre, and
3. Demonstrate critical and evaluative thinking skills in locating, analyzing, synthesizing, and using information in written communication.

Introduction to Writing Requirements: (ENG 101 - 4 credit hours)
A total of four credit hours of English (ENG) 101 are required to fulfill this category. Successful completion of ENG 101 requires a grade of C- or better and is required for graduation.

Health and Exercise Studies
Rationale:
The development of attitudes and skills for a healthy life is essential to a university student's education. In addition to developing and gaining an appreciation of health-related fitness and wellness concepts and fundamental motor skills, student participation in physical activities and sport significantly decreases major health risks, reduces stress from the pressures of academic life, and improves general social and mental well-being.

Objectives for courses in the category of Health and Exercise Studies:
Each course in the Health and Exercise Studies category will provide instruction and guidance that help students to:
1. Acquire the fundamentals of health-related fitness, encompassing cardio-respiratory and cardiovascular endurance, muscular strength and endurance, muscular flexibility and body composition; and
2. Apply knowledge of the fundamentals of health-related fitness toward developing, maintaining, and sustaining an active and healthy lifestyle; and
3. Acquire or enhance the basic motor skills and skill-related competencies, concepts, and strategies used in physical activities and sport; and
4. Gain a thorough working knowledge, appreciation, and understanding of the spirit and rules, history, safety, and etiquette of physical activities and sport.

Health and Exercise Studies Requirement: (2 credit hours)
A total of two credit hours/two courses including one Fitness and Wellness course from the university approved GEP Health and Exercise Studies course list. (Fitness and Wellness courses are those found in the HES 100-level series). Students have the option of taking HES courses on a credit-only (S/U) basis and still have the courses satisfy the GEP requirements.

Interdisciplinary Perspectives
Rationale:
Interdisciplinary study provides students with the opportunity to synthesize knowledge and skills, to make connections between fields of study, to consider more than one disciplinary approach or methodology, and to bring to bear the insights from two or more disciplines in examining and/or responding to complex problems.

Objectives for courses in the category of Interdisciplinary Perspectives:
Each course in Interdisciplinary Perspectives will provide instruction and guidance that help students to:
1. Distinguish between the distinct approaches of two or more disciplines; and
2. Identify and apply authentic connections between two or more disciplines; and
3. Explore and synthesize the approaches or views of the two or more disciplines.

Interdisciplinary Perspectives Requirement: (5 credit hours)
A minimum of five credit hours from the university approved GEP Interdisciplinary Perspectives course list.

Additional Breadth
Rationale:
One purpose of the General Education Program is to introduce students to a variety of disciplines. To this end, students are required to successfully complete a course from a general education category list that represents an approach to scholarship that is clearly distinct from the primary approach of their major.

Additional Breadth Requirement: (3 credit hours)
A total of three credit hours in the Additional Breadth category must be selected from the university approved GEP course lists that represent an approach to scholarship that is clearly distinct from the primary approach of the Major. These two approaches are distinguished for GEP purposes as "Humanities/Social Sciences/Visual and Performing Arts" or the "Mathematics/Natural Sciences/Engineering." Note: At this time, there is no Engineering course list.

Visual and Performing Arts
The Visual and Performing Arts category is part of the Additional Breadth Requirement.
Rationale:
The Visual and Performing Arts constitute a separate, unique, and independent mode of inquiry distinct from both the Humanities and Social Sciences and the Science, Technology, Engineering, and Mathematics disciplines. Being conversant in the symbolic languages of the Arts is as important as familiarity with other modes of inquiry. Many of the most profound expressions of meaning and value are embodied in the arts, and developing sensitivity and responsiveness to these through visual and performing arts courses encourages students' aesthetic sensitivities, critical judgment, and creativity. Courses in the arts also provide students with an understanding of the cultural and historical dimensions of artistic expression.
Objectives for courses in the category of Visual and Performing Arts:
Each course in Visual and Performing Arts category will provide instruction and guidance that help students to:

1. deepen their understanding of aesthetic, cultural, and historical dimensions of artistic traditions; and
2. strengthen their ability to interpret and make critical judgments about the arts through the analysis of structure, form, and style of specific works; and
3. strengthen their ability to create, recreate, or evaluate art based upon techniques and standards appropriate to the genre.

U.S. Diversity co-requisite
Rationale:
The study of diversity in the United States provides students the opportunity to consider questions of difference and culture, identity and community, privilege and oppression, and power and responsibility in our nation, and to gain an understanding of how these issues affect both individuals and communities.

Objectives for courses in the category of U.S. Diversity:
Each course in U.S. Diversity will provide instruction and guidance that help students to achieve at least 2 of the following:

1. Analyze how religious, gender, ethnic, racial, class, sexual orientation, disability, and/or age identities are shaped by cultural and societal influences;
2. Categorize and compare historical, social, political, and/or economic processes producing diversity, equality, and structured inequalities in the U.S.;
3. Interpret and evaluate social actions by religious, gender, ethnic, racial, class, sexual orientation, disability, and/or age groups affecting equality and social justice in the U.S.;
4. Examine interactions between people from different religious, gender, ethnic, racial, class, sexual orientation, disability, and/or age groups in the U.S.

U.S. Diversity Requirement: (1 course, 0 additional credit hours)
Choose one course from the university approved GEP U.S. Diversity course list. Courses on additional GEP course lists that satisfy the U.S. Diversity co-requisite will have a “USD” co-requisite indicator next to the course.

Global Knowledge co-requisite
Rationale:
Global knowledge is necessary for students to understand the world and their place in it. The global knowledge requirement provides students the opportunity to explore the complex interrelationships among nations, to gain a deeper appreciation of other cultures and peoples, and to evaluate the impact of U.S. culture and policy on the rest of the world.

Objectives for courses in the category of Global Knowledge:
Each course in Global Knowledge will provide instruction and guidance that help students to achieve goal #1 plus at least one of #2, #3, or #4.

1. Identify and examine distinguishing characteristics, including ideas, values, images, cultural artifacts, economic structures, technological or scientific developments, and/or attitudes of people in a society or culture outside the United States.

And at least one of the following:

1. Compare these distinguishing characteristics between the non-U.S. society and at least one other society.
2. Explain how these distinguishing characteristics relate to their cultural and/or historical contexts in the non-U.S. society.
3. Explain how these distinguishing characteristics change in response to internal and external pressures on the non-U.S. society.

Global Knowledge Requirement: (1 course, 0 additional credit hours)
Choose one course from the university approved GEP Global Knowledge course list or complete an NC State course taken Study Abroad. Courses on additional GEP course lists that satisfy the Global Knowledge co-requisite will have a “GK” co-requisite indicator next to the course.

Foreign Language Proficiency
Rationale:
In a sense, languages are keys to the world. The continuous expansion of international relations makes the knowledge of foreign languages increasingly significant. In learning a foreign language and studying its literature and cultures, students acquire a body of knowledge about how humans think, view the world, express themselves, and communicate with one another. Language learning also expands one’s ability to create and discover new meaning in one’s own language and culture. Knowledge of the linguistic structures of a second language helps students to understand their own language better. Likewise, an awareness of contrasting cultural concepts sensitizes students to the differences between their own culture and others. Such awareness has become increasingly important as the communities of the world have become more interconnected and interdependent. The needs of our global society require that more citizens have access to other languages and cultures in order to cooperate in the process of improving the quality of human life.

Foreign Language Proficiency Requirement
To fulfill the GEP Foreign language requirement, the student must have proficiency at the FL* 102 level. This can be demonstrated by completing two years of high school study of the same language with a grade better than a C- in each of the two years, or a passing grade at the FL* 102 level, or by placement into the FL* 201 by examination. Additional requirements for the major have been established by some Colleges and programs.

Technology Fluency
Rationale:
Today’s graduate must achieve technology fluency appropriate to the needs of his/her discipline, including technologies for problem solving, empirical inquiry and research. Students will demonstrate critical thinking skills, analytical skills, proficiency and ethical use of the technology within the discipline, which includes responding to and readily adapting to change in those technologies.

Technology Fluency Requirement: Instruction in technologies appropriate to the discipline will be included and assessed within each curriculum.

Communication In The Major (Advanced Communication)
Rationale and Requirement:
Writing and speaking are fundamental to all disciplinary and scholarly work, also serving as powerful ways of learning and evaluating learning in the disciplines. Each undergraduate curriculum must be designed and taught so that the Major enhances students’ learning through writing and speaking activities and helps students to communicate competently for academic and professional contexts. Because effective communication in these contexts often demands proficiency in the use of information technologies and resources, students must gain a basic understanding of how information is identified, organized, and accessed, in both the print and digital environments.

Objectives:
Each undergraduate curriculum must be designed to provide instruction and ample opportunities for guided practice that enable students to:

1. Learn more deeply and effectively through the use of writing and speaking activities, and
2. Master the kinds of writing and speaking that are appropriate to their academic or professional majors, and
3. Use information technologies and search strategies appropriate to their academic or professional majors to identify and access information and then to evaluate, synthesize, and incorporate that information effectively in their writing and speaking.

GEP Thematic Track Option

Rationale:
The purpose of thematic tracks is to encourage students to connect knowledge from different disciplinary areas while focusing on a unifying theme or topic. It is well suited to students who have an interest in a particular topic and who would benefit by exploring that topic from multiple disciplinary perspectives. Students will be credited with no more than one thematic track.

All students have two options for thematic tracks within the General Education Program (GEP). A student may:

1. Choose a thematic track that has been approved by the Council on Undergraduate Education (CUE). Completion of one approved thematic track will be noted in the student’s official transcript upon graduation provided that the student selects the thematic track prior to completion of degree requirements.
2. Create a thematic track of their own choice. In this case, the thematic track will not be noted in the student’s transcript. Choose to complete the GEP without a thematic track.

Objective for a thematic track: Thematic tracks will provide educational experiences that help students to use critical thinking skills to connect multiple disciplinary perspectives around a common topic or theme.

Requirement for completion of a Thematic Track: (12 credit hours)
Choose a total of twelve credit hours in the thematic track category as a combination of four courses or more (12 credit hours) - which are linked by a common theme or topic. At least one course must come from the university approved GEP Mathematical Sciences/Natural Sciences/Engineering lists; at least one course must come from the GEP Humanities/Social Sciences/Visual and Performing Arts lists. The remaining courses are also to be chosen from the approved GEP lists.

General Education Competencies

These general education competencies were identified by a panel of faculty representing all colleges who reviewed the NC State general education objectives, the Association of American Colleges and Universities’ Liberal Education and America’s Promise (LEAP) initiative, OIRP survey results, and the general education competencies adopted by peer institutions. Proposed competencies were vetted with the Council on Undergraduate Education, the Academic Policy Committee of the Faculty Senate as well as the full Faculty Senate, and each of NC State’s undergraduate colleges’ associate deans for academic affairs. As a result of this process, five competencies were selected and approved by the Provost. Once adopted, the five competencies were formally defined by a representative group of sixteen senior faculty members who teach general education courses.

For more information on General Education Competencies, please visit the GEP website (https://assessment.dasa.ncsu.edu/academic-assessment/general-education-assessment).

The General Education Competencies are defined as follows:

Written Communication Competency

Definition: Written communication is the purposeful development, expression, and revision of ideas in writing for specific audiences. Effective written communication follows appropriate genre conventions and may include a combination of text and other media.

Oral Communication Competency

Definition: For the purposes of the GEP, the oral communication competency involves the ability to ethically and responsibly use verbal and nonverbal communication for clear expression of ideas and collaborative processes; engage in active listening; build, express, and justify a claim; and adapt messages to varying situations and contexts.

Critical thinking:

Definition: Critical thinking is the active, persistent, and careful consideration of a belief or form of knowledge, the grounds that support it, and the conclusions that follow. It involves analyzing and evaluating one’s own thinking and that of others. In the context of college teaching and learning, critical thinking deliberately and actively engages students in:

• Raising vital questions and problems and formulating these clearly and precisely;
• Gathering and assessing relevant information, and using abstract ideas to interpret it effectively;
• Reaching well-reasoned conclusions and solutions and testing them against relevant criteria and standards;
• Openly considering alternative systems of thought; and
• Effectively communicating to others the analysis of and proposed solutions to complex challenges.

Creative thinking:

Definition: Creative thinking is the generation of new ideas within or across domains of knowledge, drawing upon or intentionally breaking with established symbolic rules and procedures. It usually involves the behaviors of preparation, incubation, insight, evaluation, elaboration, and
communication. In the context of college teaching and learning, creative thinking deliberately and actively engages students in:

- Bringing together existing ideas into new configurations;
- Developing new properties or possibilities for something that already exists; and
- Discovering or imagining something entirely new.

**Quantitative Literacy**

**Definition (AAC&U)**: “also known as Numeracy or Quantitative Reasoning (QR) is a ‘habit of mind,’ competency, and comfort in working with numerical data. Individuals with strong QL skills possess the ability to reason and solve quantitative problems from a wide array of authentic contexts and everyday life situations. They understand and can create sophisticated arguments supported by quantitative evidence and they can clearly communicate those arguments in a variety of formats (using words, tables, graphs, mathematical equations, etc. as appropriate)” (Rhodes, 2010).


**Graduation Requirements**

Students are eligible for graduation when they have completed satisfactorily all the academic requirements of their degree program as specified by their major department, their college, and the university.

NC State requires that, in addition to other university, college, and departmental requirements, all students must have a grade point average of at least 2.000, based on all courses attempted at NC State, in order to be eligible to receive a baccalaureate degree.

**Minimum Hours Required for Graduation**

Minimum credit hours required in a baccalaureate curriculum that has not been designated a five-year program range from 120 to 128. These are shown for each curriculum. Students may take more hours than the required minimum.

**Length of Time to Graduation**

The normal and expected length of time to graduation is four years (eight semesters) provided the student completes an average of slightly more than 16 credit hours each semester (for most curricula) and/or attends one or more summer sessions.

By action of the N.C. General Assembly, effective with the 1994 Fall Semester, new students entering any of the campuses of the University of North Carolina system (including NC State), will be assessed a 50 percent tuition surcharge once they have attempted more than 140 degree credit hours. (Degree programs at NC State require 120-128 hours or less for graduation.) Courses taken in summer school at any UNC-System campus do not count towards the 140-hour limitation. Questions about this policy should be directed to the Department of Registration and Records, (919) 515-2572.

In order to make continuous progress toward graduation, students are encouraged to take full advantage of the university’s advising and support services. Effective career decision-making and early, deliberate, long-range semester-by-semester planning of courses and careful selection of extra-curricular commitments can provide direction and motivation necessary for effective use of time towards graduation.

Additional factors that may assure a student’s continuous progress toward graduation include good academic performance in first-year and basic prerequisite courses, advanced placement for introductory courses and enrollment in summer sessions. Students are discouraged from taking unrealistic course loads as a means to accelerate their progress toward graduation as this may result in poor academic performance.

Students may take more than eight semesters to complete an undergraduate program at NC State. In some cases this is the result of effective decision-making on the part of the student for such things as participation in cooperative education or study abroad programs; a decision to be a part-time student with a reduced course load for reasons of health, necessary outside employment, or parental responsibilities; or attempting dual degrees, double majors or academic minors. Students are encouraged to discuss their specific situations and options with their academic advisors.

In other cases the length of time to graduation may be prolonged beyond the eighth semester as a result of incomplete or inadequate secondary school background requiring some additional compensatory, developmental, or prerequisite courses. Poor academic performance in the freshman year or early semesters, or late changes in curriculum, could also impact time to graduation.

**Semester-by-Semester Plans**

The requirements for curricula throughout this section are set forth in semester-by-semester displays. One purpose for these displays is to illustrate how certain sequences of courses and prerequisites may be scheduled. Another purpose is to reflect whether courses are normally offered in the fall or the spring semester. Otherwise, the semester-by-semester displays are merely advisory and not mandatory. The typical semester schedule shown in the displays may not be the appropriate one for some students. Students are required to consult with their faculty advisors prior to registration each semester. Semester-by-semester plans are available on the Office of Undergraduate Courses and Curricula website (https://oucc.dasa.ncsu.edu/undergraduate-academic-programs/semester-by-semester-plans).

**Limited D Grades**

Some colleges and departments have established limitations on the use of D grades in certain courses or categories of courses for satisfying graduation requirements. Check with your academic advisor if you have any questions.

**Grade Point Average in Major**

Some departments have established graduation requirements of a grade point average of 2.000 on all courses attempted in the major at NC State or a minimum letter grade requirement in some or all major courses. Such a requirement is in addition to the university grade point average total requirement of 2.000 for all courses attempted at NC State. Students are encouraged to inquire about specific requirements in majors of interest.
Residence Requirements
To be eligible for a bachelor’s degree, a student must be enrolled in a degree program at NC State, must have completed at least 25 percent of credit hours required for graduation through courses offered by NC State, and must have earned at least 30 of the last 45 hours of credit through NC State courses. In no case shall the proportion of credit hours taken at NC State and applied towards a bachelor’s degree be less than 25 percent. Individual departments and/or colleges may have additional residence requirements. Be sure to ask your advisor about any special requirements.

Note: The College of Engineering has a policy that transfer students normally must earn at least 48 of their last 60 hours of credit at NC State while enrolled as degree candidates. The College of Management has a policy that Accounting and Business Management majors normally must earn at least 30 credit hours while officially enrolled as a degree candidate in either the ACC or BUS curriculum. Students in the Economics majors (EC/ECS) must earn at least 1/2 of their required economic credits while enrolled in the EC or ECS curriculum. Check with your advisor to see if such additional requirements apply to your major.

Satisfactory Academic Progress
Beginning with the 2015 fall term, all undergraduate students, regardless of when they first enrolled in NC State University, will be subject to the new Satisfactory Academic Progress (http://policies.ncsu.edu/regulation/reg-02-05-03) and Continuation of Undergraduate Enrollment (http://policies.ncsu.edu/regulation/reg-02-05-01) regulations. The first evaluation of SAP took place in May 2016.

Progress Toward Degree (PTD)
To make satisfactory PTD, students:

• must be enrolled in a minimum of 12 credit hours per term in a degree-granting major before entering their fifth term (fall or spring) to be considered full-time.
• are encouraged to maintain continuous enrollment in a minimum of 15 hours toward a degree every fall and spring term in order to remain on track to graduate.

Satisfactory Academic Progress (SAP)
Satisfactory academic progress (SAP) will be evaluated for all students, including part-time students, at the end of each academic year (May). Students admitted mid-year (January) and those who attend only one term for the year will also be evaluated in May each year.

Satisfactory academic progress is measured by meeting the following three standards:

• Pace of Completion: Students must complete at least 2/3 of all hours attempted each academic year (summer term – spring term). Attempted hours include all hours enrolled for credit as of census date plus hours added after census. Hours dropped after census, withdrawn or excluded through Grade Exclusion (REG 02.20.16 (http://policies.ncsu.edu/regulation/reg-02-20-16)) also count as attempted hours.
• Maximum Timeframe: Students must graduate before attempting more than 150% of the hours required for their degree program (e.g. 180 hours for a 120 hour degree program).
• Degree Status: Students must maintain an academic standing that allows for continued enrollment.

Progress Deficiency
Students failing to make satisfactory academic progress will have a Progress Deficiency hold placed on their record preventing enrollment and will have future term enrollments (summer, fall or spring) canceled.

• Students meeting SAP, but not the PTD requirements, may be placed on Progress Deficiency by their College. Colleges may define reasonable progress as: completing courses required for the student’s major in a timely manner, maintaining the expected GPA for the major, or making timely progress toward degree completion.
• Students placed on Progress Deficiency may submit an appeal to continue enrollment in the next term. (For information about appeals, see RUL 02.66.01 Undergraduate Readmission and Appeals (http://policies.ncsu.edu/rule/rul-02-66-01))
• Students with successful appeals will be placed on Academic Probation for one term (summer, fall or spring) and will be required to meet the satisfactory academic progress standards described above.

Student Records
Transcripts of Academic Records
An official transcript is issued only at the authorization or written request of the student concerned. A transcript is a complete copy of a student’s academic record at the time that it is issued. It contains all course work, including undergraduate, graduate and/or non-degree, taken while enrolled at NC State University. NC State will NOT issue a partial transcript. The university will automatically send all course work when a transcript is requested.

For more information on how to obtain an official transcript, please visit the Student Services Center website (https://studentservices.ncsu.edu/your-grades/transcripts).

Change of Name, Address, or Telephone
It is the student’s responsibility to notify the Department of Registration and Records (https://registrar.ncsu.edu) of any changes in name, address, or telephone. Failure to do so may prevent prompt delivery of important university correspondence and correct notification of hometown newspapers of honors received. International students are required by law to notify the university of any change or correction in name or address within 10 days. Updating address changes in MyPack Portal system fulfills international students’ federal requirements for maintaining status in SEVIS.

Name changes can only be completed in person at Registration and Records, 1000 Harris Hall by providing a picture ID and proof of the name change (i.e. driver’s license, social security card) or by written authorization along with proof.

Changes of address or telephone can be completed in MyPack Portal (http://mypack.ncsu.edu) > Main Menu > Student Self Service > Student Center, under Personal Information.

Note: NC State University policies, rules and regulations are continuously being updated and reviewed as the need arises. For the most current
information regarding this section, please visit the Policies, Regulations, and Rules website (http://policies.ncsu.edu).

**Student Status and Honors**

Below are plain-language explanations of academic honors and academic status, as well as information about withdrawal from the university.

- Academic Honors (p. 167)
- Academic Status (p. 167)
- Readmission (p. 168)
- Withdrawal (p. 168)

**Academic Honors**

**Academic Honors**

High ranking students in their freshman year are eligible for membership in Phi Eta Sigma and Alpha Lambda Delta. Both of these national scholastic honoraries require a 3.5 semester grade point average or better during the first semester or a cumulative average of 3.5 for both semesters during the freshman year. Juniors ranking in the top three percent of their class, seniors ranking in the top six percent of their class, and outstanding graduate students are eligible for election to membership in Phi Kappa Phi, the university’s most prestigious campus-wide scholastic honor society. Outstanding undergraduate and graduate students majoring in the arts and sciences are also eligible for election to membership in Phi Beta Kappa.

**Semester Dean’s List:** A full-time undergraduate student who earns a semester average of 3.5 or better on 12 to 14 hours of course work for which grade points are earned or a semester average of 3.250 or better on 15 or more hours of course work for which grade points are earned will be placed on the Dean’s List for that semester. Students are not eligible for the Dean’s List in any semester in which they receive an F or IN grade. When IN grades are resolved, however, students who are otherwise eligible shall be added retroactively to the Dean’s List for that semester. This option does not apply if a course with an “F” grade is withdrawn or forgiven. Dean’s List recognition shall be noted on the student’s semester grade report and permanent academic record.

**Graduation with Honors:** Undergraduate degree honor designations are:

- Cum Laude for GPA 3.25 through 3.499
- Magna Cum Laude for GPA 3.5 through 3.749
- Summa Cum Laude for GPA 3.75 and above

To be eligible for degree honor designations students must have completed at least two semesters and at least 30 credit hours at NC State.

**Valedictorian and Highest Ranking Scholar in a College:** To be eligible for graduation as valedictorian, an undergraduate student must have completed at least 100 academic credits at NC State and must have entered their final semester with a 4.0 cumulative Grade Point Average. To be eligible for consideration as a highest ranking scholar in a college, an undergraduate student must also have received at least 100 academic credits at NC State (including credit by examination, advanced placement credit, and S/U courses). These 100 credits may include no more than 20 transfer credits through programs officially sponsored by NC State.

Specifically, these programs are Cooperating Raleigh Colleges, National Student Exchange, International Student Exchange, NC State-sponsored study abroad programs, and the affiliated hospital programs in Medical Technology. All students whose accumulated grade point averages, based on all courses attempted at NC State, make them eligible for one of these honors, shall be so recognized. That is, in the case of ties, more than one student will receive the honor. However in the case of ties for valedictorian, no salutatorian will be recognized.

REG 02.30.01 - Academic Honors (https://policies.ncsu.edu/regulation/reg-02-30-01) is available to view in full on the University’s Policies, Regulations and Rules website.

**Academic Status**

Beginning with the 2015 Fall term, all undergraduate students, regardless of when they first enrolled in NC State University, are subject to new Continuation of Undergraduate Enrollment Regulation, which governs Academic Status and Suspension.

**Academic Status and Continuation Criteria**

Academic status will be calculated at the end of every fall, spring and summer term according to the rules below:

**Good Standing:** Students must maintain a cumulative Grade Point Average (GPA) of at least 2.0 or be on Academic Warning or Academic Probation status in order to continue enrollment. Students are considered to be in Good Standing if they are eligible to continue enrollment.

**Academic Warning:**

Students who meet either of the following criteria will be placed on Academic Warning and will be allowed to continue enrollment:

- Have a cumulative GPA less than 2.0 and a grade point deficit of 15 or less
- Have a cumulative GPA above 2.0 and a term GPA below 1.0

Students on Academic Warning must maintain a term GPA of at least 2.0 for every subsequent fall, spring and summer term of enrollment, until they achieve a cumulative GPA of at least 2.0.

**Academic Probation:**

Students will be placed on Academic Probation for one term after an appeal to return from Academic Suspension has been approved.

Students on Academic Probation who:

- earn a term GPA of at least 2.0 during their Probation term will move to Academic Warning and will be subject to the continuation criteria described above.
- fail to earn a term GPA of at least 2.0 during their Probation term will be suspended.

**Timely Advising:** Students on Academic Warning or Academic Probation are required to meet with their advisor during the first four (4) weeks of the fall or spring term to discuss their plan for academic success.

**Academic Suspension:**

Students who meet either of the following criteria will be placed on Academic Suspension:
- Have a cumulative GPA less than 2.0 and a grade point deficit* greater than 15 at the end of any term
- Students on Academic Warning or Academic Probation who fail to maintain a term GPA of at least 2.0 for every subsequent fall, spring, or summer term or fail to achieve a cumulative GPA of at least 2.0.

Options for suspended students:

- Students on Academic Suspension with a grade point deficit* of 15 or less may choose to enroll in NC State summer terms in an effort to improve their status.
  - Suspended students enrolled for summer will have their suspension deferred and their fall schedule maintained until the end of their summer enrollment.
  - Students on suspension deferral for summer must raise their cumulative GPA to at least a 2.0 or pass at least 6 hours with a cumulative summer GPA of 2.0. Failure to do so will result in the student being returned to Academic Suspension status.
- All suspended students have the right to submit an appeal to continue enrollment for the next term.

**NOTE:** Students who remain on Academic Suspension will have all future term enrollments canceled and may not re-enroll.

*Grade Point Deficit*

Grade point deficit (GPD) is defined as the number of grade points below the required 2.0 minimum GPA. The deficit reflects the number of hours of B (3.0) grades necessary in the future to raise the GPA to the 2.0 minimum.

**REG 02.05.01 - Continuation of Undergraduate Enrollment** (http://policies.ncsu.edu/regulation/reg-02-05-01) is available to view in full on the University’s Policies, Regulations, and Rules website.

### Readmission

An undergraduate student who does not enroll for any fall or spring term must apply for readmission to continue their degree studies. Readmission is not guaranteed and is subject to available capacity in the student’s college and major.

Students applying for readmission must be eligible to return to NC State and to any institutions attended during their break in enrollment. Readmission applications should be submitted prior to the start of enrollment for each term. Students should consult the Registrar’s website for application and enrollment dates.

A non-refundable application processing fee must accompany all applications.

#### Readmission for Students Eligible to Continue

Readmitted students who were eligible to continue at the time of leaving and who have a cumulative grade point average (GPA) less than 2.0 will be placed on Academic Warning and subject to approved continuation requirements. (See **REG 02.05.01 Continuation of Undergraduate Enrollment** (http://policies.ncsu.edu/regulation/reg-02-05-01).)

#### Appeals for Students Ineligible to Continue

Students on Academic Suspension or Progress Deficiency may appeal for readmission by the deadlines published on the Student Services Center Website (https://studentservices.ncsu.edu/your-degree/academic-progress/continuation-appeal).

### Withdrawal

#### Withdrawal from the University

Students who wish to drop all the courses for which they are registered must withdraw from the university for the remainder of the semester or summer session in which they are enrolled. Students who have registered and prepaid are considered to be registered and must be officially withdrawn, unless they have notified the university prior to the beginning of the first day of classes that they wish to have their registration cancelled.

Undergraduate students who wish to initiate a term withdrawal should consult their academic advisors to discuss the academic implications of the intended withdrawal. A withdrawal may impact a student’s academic eligibility, financial aid, and progress toward a degree. All withdrawals for a current or upcoming term are initiated through the self-service Term Withdrawal page in the MyPack Portal. The withdrawal process will include information on refunds and financial aid and will provide contacts to University Housing and Dining. Undergraduate students who do not enroll for a fall or spring term are required to complete the readmission process before returning to classes.

Non-Degree Studies students withdraw through Student Self Service in MyPack Portal. NDS students may contact the Student Services Center at (919) 515-6278 if they have any questions about this process.

International students who wish to withdraw from the university must meet with an Office of International Scholar and Student Services advisor to effect a withdrawal in SEVIS before withdrawing from the university in order to protect their immigration status. International students who are contemplating a withdrawal must call OIS, (919) 515-2961 for an appointment.

NC State students carrying course work at another campus under the Inter-Institutional arrangement must contact the Department of Registration and Records, 1000 Harris Hall, (919) 515-2572, to initiate the paperwork necessary for removal from the class roll at the other institution.

Students visiting from other institutions who are registered for NC State course work under the Inter-Institutional arrangement must initiate withdrawal on their home campus.

Financial Aid recipients who withdraw during the semester or summer sessions may be required to repay all or a portion of the aid received, depending on the date upon which the withdrawal is effective. All students are required to get clearance through the Office of Scholarships and Financial Aid during the withdrawal process to determine their individual repayment obligations.

#### Withdrawal After the Last Day of the Official Course Drop Period

It is considered that after the last day of the official drop period a student has become a partner in an implied contract with the university to continue until the end of the semester. Therefore, withdrawals without academic penalty are granted by the university only when exceptional circumstances exist.
Undergraduate and graduate degree students may receive late withdrawals through the Counseling Center under three conditions:

1. Certification by an appropriate medical professional of serious disruption in academic functioning for medical reasons. Such medical petitions are subject to review by a university physician and by the Counseling Center.

2. Certification by the Counseling Center of serious disruption in academic functioning because of an emotional problem or crisis. It is important to verify that (a) there has been a significant decrease in the student's usual level of psychological functioning and (b) that regaining that previous level of functioning will involve a process of sufficient academic disruption to make continuing as a student unreasonable. In this case a "hold" may often be placed on the student's readmission pending certification by the Counseling Center and/or independent psychologist/psychiatrist that the student has regained and can be expected to maintain that usual level of psychological competence.

3. Verification by the office of the student's college dean that a decision has been reached in accordance with that college's policies and procedures that a documented hardship of any kind which, responsibly handled, resulted in it being unreasonable to insist that the student continue. The hardship should normally have been reasonably unforeseeable.

Courses for which students are officially enrolled are recorded on the transcript without grades or grade points but with a notation of "W" to indicated approval to withdraw after the withdrawal deadline.

Student Conduct

Code of Student Conduct

All students who enroll at NC State are required to adhere to the Code of Student Conduct. The Code establishes the behavioral expectations for student conduct in the University community, both inside and outside the classroom. The Code, therefore, prescribes the types of behaviors that adversely affect the University community, and the resulting actions that may be taken to both educate students about behavioral expectations and to protect NC State's community. The Code and accompanying Disciplinary Procedures outline the process that is followed when a student has been charged with an alleged violation of the Code. Academic and Non-Academic misconduct, both on and off campus, are addressed. Students who are found responsible for violating the Code receive sanctions from the University. Sanctions may include a written warning, probation, suspension, or expulsion from the University and/or other educational outcomes. For more information, please contact the Office of Student Conduct at 919.515.2963 or access the Code through the Office of Student Conduct website (https://studentconduct.dasa.ncsu.edu).

Credit by Examination Through Independent Studies

Credit by Examination

Undergraduate students currently registered at NC State may request an examination for course credit in a course whether enrolled in that course or not, under the conditions described below. Students must initiate a request with their advisor (except when a teaching department awards credit based upon group testing for placement purposes). Should the advisor approve, the student must arrange for the examination with the department offering the course. The department may administer the examination in any manner pertinent to the materials of the course. Departments are encouraged to offer credit by examination in all courses but have the prerogative of excluding certain courses, which are demonstrably unsuited for credit by examination.

The academic standards for credit by examination will be commensurate with the academic standards for the course. If a student's performance on the examination is judged to be of "C-" or higher quality, the department will notify the Department of Registration and Records on a Grade Change Report that the student has received Credit by Examination for the course. The Department of Registration and Records will enter the appropriate number of credit hours on the student's permanent academic record. Credits earned through Credit by Examination are not used in the computation of a student's grade point average.

The Department of Registration and Records will post course credit by examination to a student's permanent academic record only if that student is currently registered at NC State. However, if the course credit by examination would enable a student to complete the requirements for a degree, that student would not have to be registered in order to receive the credit.

If a student fails to achieve "C-" or higher quality work on an attempted credit by examination, no action is required other than the department's notifying the student. However, that student is not eligible for another such examination in the same course.

Once a student has failed a course or has completed credit or audit for more than fifty percent of a course, the student may not attempt credit by examination for that course. Under unusual circumstances, exceptions may be made upon the written recommendation of the student's advisor and the approval of the department offering the course. A student who receives credit by examination in a course in which that student is currently enrolled must officially drop that course no later than mid-semester.

Credit by Examination Through Independent Studies

Persons who are not currently enrolled on campus and who have gained through study or experience, knowledge of the content of undergraduate credit courses offered through Independent Studies may (with the approval of the Independent Studies staff and the academic department offering a course) receive credit for that course by special examination. Students may request approval to attempt credit by examination by completing and submitting a form available from Independent Studies.

The University of North Carolina
Box 1020
The Friday Center
Chapel Hill, North Carolina 27599-1020
(919) 962-1104

Currently enrolled students are not eligible for credit by examination through Independent Studies. These students should go directly to the appropriate academic department to request credit by examination under the regular procedures in effect on campus.

Transfer Credit

Transcripts of college course credit for new transfer students and for NC State students who have taken course work at another institution are evaluated by the Office of Undergraduate Admissions in consultation with the deans of the NC State colleges to determine how the work applies.
to fulfilling the graduation requirements of each student’s intended major. Only courses where the student receives a grade of C or better will be considered for transfer credit. Students admitted to an NC State undergraduate degree program who wish to take courses at another institution must obtain prior endorsement from their academic department and prior written approval from their college’s associate dean (or dean’s office) in order to insure that the transfer credits will apply toward specific graduation requirements. Transfer credit is not recorded on former students’ permanent records until after they have been readmitted and have re-enrolled at NC State. Do not assume that transfer courses will be accepted. Speak to your advisor.

Credit accepted for transfer from another institution is shown only as credit hours and is not included in the computation of the grade point average. You can see a list of courses and how they transfer to NC State from other institutions on the Undergraduate Admissions website (http://admissions.ncsu.edu/apply/admission-review/transfer-admission-review-process/#transfercredits). Please note this website speaks only to the general transferability of the course work. How transfer credit applies to a student’s degree is determined by his/her academic department and college associate dean’s office. Also, speak to your advisor about transfer credits.

For the most current information regarding this regulation, please view the full regulation (http://policies.ncsu.edu/regulation/reg-02-10-03).
Continuing Education

McKimmon Center for Extension and Continuing Education (MCE&CE) (http://www.mckimmon.ncsu.edu)

Alice S. Warren, Vice Provost for Continuing Education

As a key component of Extension, Engagement, and Economic Development, the McKimmon Center for Extension and Continuing Education (MCE&CE) facilitates and enhances access to the academic resources of the campus by a wide range of audiences. Units within MCE&CE provide professional expertise in the identification of educational needs and the development of relevant programming in collaboration with the faculty, departments, colleges and external constituents; in the management and implementation of noncredit offerings; in the operation of a full-services, state-of-the-art conference facility; in the delivery of technical assistance and applied research; and in the evaluation and outcome assessment of programs and services delivered.

Specifically, the McKimmon Center for Extension and Continuing Education

- develops and delivers noncredit continuing education programs to meet the professional development or training needs of business/industry, governmental agencies and nonprofit organizations and communities
- offers customized programs for diverse clients
- stimulates interest in the development and delivery of relevant noncredit distance education offerings
- identifies opportunities for joint initiatives and assists in measuring learning outcomes and impacts
- provides a wide array of software-specific and certification courses for individuals and organizations
- operates the McKimmon Conference and Training Center which is a large, flexible facility that hosts educational meetings for groups ranging in size from 5 to 1,200
- provides opportunities for lifelong enrichment for people over the age of 50 through a robust learning-in-retirement program
- conducts program evaluation and outcomes research, survey research, technology application and customized consulting services for federal/state/local governmental agencies and nonprofit organizations
- performs a key role in the public schools statewide testing and accountability program, serves as the campus provider of Continuing Education Units (CEUs) that are earned through participation in approved noncredit courses
- coordinates and manages the annual Connecting-in-North Carolina (CINC) tour for faculty and key administrators to enhance the three-fold mission of our land-grant institution
- affords opportunities for students in collaboration with the University Honors Program and Service Learning Program

The McKimmon Conference and Training Center (http://www.mckimmon.ncsu.edu/mckimmon)

Chip Futrell, Director

Greg Emma, Assistant Director
Phone: 919.515.2277

The McKimmon Conference and Training Center provides meeting facilities, audiovisual equipment and support services for adult education programs. Administrative services are available to organizations that need assistance in planning and implementing conferences, short courses and other educational activities.

Catering coordination is also available in the planning and successful implementation of banquets and related functions.

The center accommodates small meeting groups as well as large national and international conferences. There are 18 meeting rooms that can be arranged in several different styles. These styles include, but are not limited to: classroom, theater, round tables and conference-style. Rooms range in size and can accommodate groups of 36 to 1200. Ceiling mounted projectors, drop-down screens and wireless internet are available in all rooms. Live streaming and videoconferencing are available to help you reach a bigger audience, or archive the recorded class online for students to review.

Technology Training Solutions

Chip Futrell, Director

Holly Sullenger, Assistant Director
Phone: 919.515.8163

Since 1989, NC State University’s Technology Training Solutions (formerly the Computer Training Unit) has been a leading provider for the technology training needs of the Triangle. Technology Training Solutions (TTS) operates out of the McKimmon Center, utilizing four dedicated, state-of-the-art labs and instructors that are experts in their field. New classes are introduced three times per year, allowing adult learners in North Carolina to be amply prepared for future technology needs.

Whether an individual is looking for a single class to become familiarized with software or is committed to multiple weeks of certification training, TTS can address all technology training needs. TTS also provides customized corporate training both at the McKimmon Center and at client sites.

Visit NC State University’s Technology Training Solutions website today for a complete course schedule and certification information. TTS also has a social media presence and can be followed on FaceBook, Twitter, Pinterest, LinkedIn, and Google+

Office of Professional Development

Chip Futrell, Director

Kerrie Cave, Lead Program Coordinator
Phone: 919.515.2261

NC State University’s Office of Professional Development (OPD) is a unit of the Office of Continuing and Professional Education. Dedicated to the development and delivery of non-degree professional training courses, OPD provides you with a broad range of quality educational opportunities in a flexible, comfortable, and affordable learning environment.
OPD offers a variety of experiences, including conferences, seminars, and in-house/on-site training, to assist you in your professional development and your work. Most courses can be brought to your workplace or other location of your choosing, including dedicated training for your organization here at the McKimmon Center on NC State's campus. Courses can be customized so you and your employees receive training tailored to your specific needs.

OPD can help you manage your next educational event with conference management services, including

• Expert planning that saves time
• Integrated marketing services that cost less and get results
• Registration management of the utmost accuracy
• Financial management that keeps you in control, yet manages your money with greatest accountability
• Complete program staffing that lets you focus on the big picture

What makes OPD's conference management services unique:

• OPD's services are a la carte; you only pay for what we do. It's less expensive for you to hire OPD as needed than hire a full-time employee.
• Hiring OPD enables you to offer more programs. While you're focusing on content, we're taking care of the details.
• OPD can manage your event regardless of its location.
• OPD has helped clients to generate millions in revenue over the years.
• We can produce and mail conference brochures and postcards for some of the lowest prices available.
• OPD's clients and partners benefit from our annual print bids, which in turn, keep your costs down.
• You will benefit from the expertise of 10 Certified Program Planners.

Whether your event is a conference, workshop, meeting, or symposium with a local or international audience, whether it is held on campus or at a remote location, OPD is your perfect partner to get the job done.
The Graduate School

The Graduate School
1020 Main Campus Drive, Box 7102
Raleigh, NC 27695

The Graduate School is committed to providing a transformative experience for graduate students and postdoctoral researchers at NC State by preparing these talented individuals to become true leaders ready to tackle the major challenges facing our state, nation, and world. NC State is recognized as a national leader in the STEM disciplines, and the University supports advanced study and innovative research in numerous fields, including agriculture, life sciences, design, education, engineering, natural resources, humanities and social sciences, management, textiles, and veterinary medicine, along with many exciting interdisciplinary programs.

NC State currently offers over 160 master’s programs and more than 60 doctoral programs in both traditional and emerging disciplines, including biomedical engineering, biotechnology, genomics, geographical information systems, nanotechnology, and natural resources. The University also offers a broad range of certificate programs that afford graduate students and postdoctoral scholars with opportunities to collect certification for key skills and knowledge. Moreover, several Professional Science Master’s programs are offered that tailor educational outcomes to employer needs.

The Graduate School also proudly offers numerous professional development experiences throughout the year. These opportunities are meant to endow graduate students and postdoctoral scholars with a competitive edge that enhances their ability to land jobs and to experience long-term career success. Graduate School professional development programming incorporates training that pertains to four core competency areas: professional and personal development, leadership and management, academic development, and communication. Signature programs include the Notes From the Field seminar series, the Transition to Industry Immersion Program, the Dissertation and Thesis Institute, the Teaching and Communication Certificate program, the Preparing Future Faculty program, the STEM Faculty Launch program, the Team Case Studies course, and the Job Search Strategies course.

For a list of graduate degrees, details on the programs, and admissions information, please consult the Graduate Programs website (https://grad.ncsu.edu/programs).
Other Offices

Office of Information Technology
M.I. Hoit, Vice Chancellor for Information Technology and Chief Information Officer
K.G. Horne, Director, Business Services
E.D. Sills, Assistant Vice Chancellor for Shared Services
G.W. Sparks, Assistant Vice Chancellor for Communication Technologies
G.T. Hazlehurst, Assistant Vice Chancellor for Enterprise Application Services
S.N. Martin, Senior Director, Outreach, Communications and Consulting
M.S. Bell, Chief Information Security Officer
S. West, Assistant Vice Chancellor for Technology Support Services

NC State offers you a leading-edge academic computing environment to enrich your student life and learning. Here, you’ll find that many colleges and administrative and academic units are involved in providing various IT resources, services and information.

The Office of Information Technology (OIT) provides centralized campus-wide computing and information and communication technology services in support of the university’s academic and administrative goals. Some of OIT’s major services are:

- Campus-wide data network infrastructure, including the multi-gigabit network backbone and wireless computing infrastructure
- MyPack Portal, the gateway to university online enterprise systems and services, such as Human Resources, Financials and the Student Information System
- ResNet, high-speed wired and wireless Internet access for students living in campus housing
- Telephone and cable TV services, which are available to all students, faculty and staff
- Hundreds of software packages for student use from computing labs, and many also available from the NC State Virtual Computing Lab (VCL) environment
- Google Apps @ NC State, the university’s official provider of Web-based email and calendaring services and numerous collaborative tools
- University’s central Web servers
- File space
- Classroom technology support
- High Performance Computing (HPC) for researchers and students in computational science
- IT security for campus computing resources, including acceptable use rules and regulations
- NC State Help Desk, which provides support to students and other users of campus resources
- Hardware and software support for student-owned computers through the OIT Walk-in Center

Unity ID and Password
As an NC State student, you will have a Unity ID and password, which are your credentials to access campus-wide computing services and facilities.

Information about your Unity ID and password and help are provided during student orientation sessions, from the NC State Help Desk, and online on the OIT (https://oit.ncsu.edu) website.

Unity Labs
As a student, you may use the Unity computer labs that are equipped with Windows, Linux and Macintosh workstations that provide direct access to information technologies. Colleges and academic departments support additional computing facilities, and overall, there are more than 125 student-computing labs on campus, with more than 2,800 workstations with high-speed network connections. NC State does not require you to own a computer, although specific colleges or programs may make this requirement. Information about computer recommendations, specifications and purchasing options are published online on the OIT (https://oit.ncsu.edu) website and updated annually.

Help
For additional information, see NC State’s computing resources:

- OIT (https://oit.ncsu.edu) website
- OIT Walk-in Center, West Dunn Building (corner of Dan Allen and Thurman drives)
- NC State Help Desk, 515-HELP (4357); help@ncsu.edu; or help.ncsu.edu

Office of Professional Development
Chip Futrell, Director
Website: www.ContinuingEducation.ncsu.edu;
Phone: (919) 515-2261

The Office of Professional Development (OPD) develops, promotes, and coordinates noncredit seminars, certificate programs, and conferences to a broad market on a wide range of topics. Program areas include: GMAT, GRE and LSAT test preparation; accounting and taxation; agriculture; communications; education; engineering; English as a second language; environmental; management; textiles; and general interest. Events management services are available to help both campus and non campus groups more efficiently and productively administer educational seminars, workshops, and conferences.

Office of Research, Innovation and Economic Development
Alan H. Rebar, Vice Chancellor for Research
Mladen A. Vouk, Associate Vice Chancellor for Research Development
Dennis Kekas, Associate Vice Chancellor for Partnerships and Economic Development
Jonathan Horowitz, Assistant Vice Chancellor for Research Infrastructure
Rick Liston, Assistant Vice Chancellor of Finance and Administration
Kelly Sexton, Assistant Vice Chancellor, Office of Technology Commercialization and New Ventures
Matt Peterson, Director, Federal Research Affairs
Genevieve Garland, Director of Operations

Bonnie Aldridge, Manager, Communications and Planning

**Vice Chancellor.** As Chief Research Officer (CRO), the Vice Chancellor oversees all research activities at NC State. Under his authority, units reporting to the Office of Research, Innovation, and Economic Development centrally manage research administration, the university’s intellectual properties, and industry and government agency alliances on the university’s award-winning research campus. Researchers at NC State are supported by $349+ million in sponsored programs from federal, local government, industry, and nonprofit organizations. NC State’s research portfolio exceeds 4,000 invention disclosures, 880 US patents, 600 active commercialization agreements, and 500 products to market. Centennial Campus hosts more than 70 corporate, government and nonprofit partners working with the university’s 75+ centers and institutes, laboratories and research departments.

**Office of Technology Commercialization and New Ventures (OTCNV).** NC State University is a research powerhouse and a powerful economic engine for North Carolina. OTCNV plays a crucial role in this by protecting and promoting University research discoveries and intellectual property, working with and guiding industry partners, and promoting the acceleration of startups. OTCNV provides innovators with a wide range of programs and services to protect, market, and license intellectual property developed at NC State. Collaboration with NC State innovators and industry partners has led to the creation of more than 100 startups and 500 commercialized products that benefit society on a local, national and global scale.

**Partnerships + Alliances.** Partnerships and Alliances builds mutually beneficial relationships between the University and industry, government agencies and non-profits; streamlines access to important resources to help partners and potential partners who want to work with the University; and assists businesses and other organizations that are interested in relocating to North Carolina or growing their footprint here. NC State’s Centennial Campus is a university research park that provides proximity to world-class researchers, workers and students – all in an amenity-rich environment. Industry Alliances (http://industryalliances.org) cultivates partnerships with organizations that have a desire to engage with the University, developing mutually beneficial relationships and adding value to the collaborative experience.

**Research Development Office (RDO).** The RDO facilitates collaboration between faculty and interdisciplinary research experts, providing strategic and responsive support that enhances the university’s most valued research initiatives. By searching a centralized, easy-to-access portal, researchers quickly find internal and external funding opportunities. Once identified, potential funding translates to successful grants with the help of Research Development’s tools and training resources that support researchers as they plan, write, and submit competitive proposals.

**Sponsored Programs & Regulatory Compliance Services (SPARCS).** SPARCS facilitates the submission of proposals, negotiation of agreements, the administration of internally and externally funded projects, and the administration of subagreements that provide funding to NC State University. This includes all aspects of externally sponsored research and scholarship, from pre-award management to non-fiscal post-award management.

**Small Business and Technology Development Center (SBTDC).** The SBTDC is the state’s leading resource for growing and developing businesses. Since 1984, the center has helped more than 100,000 North Carolina business owners and aspiring entrepreneurs make better decisions, often leading to increased revenues and employment.

**Centers + Institutes.** NC State's Centers and Institutes reflect the university’s commitment to interdisciplinary scholarly pursuit, including research, instruction and public service. These cutting-edge organizations are frontrunners in their field, blazing the trails for other researchers to follow. Research and innovation on topics ranging from climate change to textiles add value to the everyday lives of our state's citizens, maintaining public trust and admiration and standing at the forefront in global excellence for research and discovery. Here, the leadership of these organizations can access the materials, procedures and policies necessary to manage their efforts responsibly, equitably and with the highest integrity.

**Federal Relations.** Federal Relations serves as a primary liaison between NC State and the federal government, public policy makers and national organizations on issues related to higher education, research funding, and specific matters affecting students, faculty and staff.

**Integrated Support Services Center (ISSC).** The ISSC was created to provide streamlined, professional services to faculty and administrators, eliminating costly duplication, creating efficiency and improving timeliness.

**University Advancement**

Brian C. Sischo, Vice Chancellor for University Advancement

Brad C. Bohlander, Associate Vice Chancellor for University Communications & Chief Communications Officer

Francine Cronin, Associate Vice Chancellor for University Development

Kushal Dasgupta, Associate Vice Chancellor for Advancement Services

Lisa Dyer, Executive Assistant to the Vice Chancellor

Derek Bryan, Assistant Vice Chancellor of Finance and Business

Mark Minor, Assistant Vice Chancellor for Marketing and Creative Strategies

Ralph E. “Benny” Suggs, Associate Vice Chancellor for Alumni Relations &

Christina Walker, Director of Principal Gifts

The Office of University Advancement at NC State strives to enhance the perception of and knowledge about the university’s programs and accomplishments; to provide alumni, students, and friends with programs and services that instill loyalty and pride; to secure resources which will enhance the academic quality of the institution; to be good stewards of its endowments and advance the growth of investment at NC State; to promote advocacy of the university and to effectively integrate advancement efforts across the university’s divisions, colleges, programs and affiliated foundations. The office oversees a division that includes development, alumni relations, university communications, and advancement services. Visit the University Advancement website (http://giving.ncsu.edu/about-us) for more information.

**Advancement Services** supports all components of University Advancement, as well as other units involved in advancement activities throughout NC State, through management of the primary prospect/donor/alumni/friend database, conducting donor research, processing and receiving private pledges, gifts and grants, generating official fundraising activity reports, managing prospect management and tracking systems, providing donor stewardship and endowment reporting, and developing and coordinating all development communications. Other initiatives include management of the University online giving website, support of the alumni association alumni web portal, conducting
education and training in the areas of national best practices and rules and regulations pertaining to fundraising activities, ethics, and accountability, and management of an international listserv dedicated of the furtherance of the entire advancement services profession.

The NC State Alumni Association engages alumni through programs and services that foster pride and enhance lifelong connections to NC State. The Association encourages alumni to be Red and White for Life — with connections to the university and fellow alumni no matter where they live by linking alumni to the university through membership, a statewide, national, and growing international network of alumni, programming for special-interest groups and students, events and an array of communication tools, including the award-winning NC State magazine. The Alumni Association offers membership options and benefits for alumni who join, and supports a growing Student Alumni Association (SAA), with events and programming that builds connections and enhances their student experience. The Association also sustains the prestigious Caldwell Fellows Scholarship Program, funded by alumni endowments and contributions, and designed to foster academic excellence, leadership, personal growth and service learning.

The Association upholds campus traditions such as the official class ring, Homecoming, Ram Roast, the Tradition Keepers Medals, Wolfpack Freshmen Welcome events, and Founders’ Day, as well as the Legacy Luncheon for incoming freshmen whose parents and/or grandparents attended NC State. In addition, the Association is responsible for the Evening of Stars Gala to celebrate NC State’s distinguished alumni, and the Faculty Awards to recognize the achievements of the university’s outstanding undergraduate and graduate faculty. The Association offers services such as the Wolf Treks alumni travel program and Career Services. Students and alumni can visit the Alumni Association in the Dorothy and Roy Park Alumni Center on Centennial Campus, or contact the Alumni Association at (919) 515-3375 or (800) 627-2586. For a complete overview of programs, services and events, visit the Alumni Association's website (http://www.alumni.ncsu.edu).

University Development works with the colleges and programs at North Carolina State University to secure private financial support for priority projects and programs. This support may come from individuals (alumni, parents, students, faculty, staff, and friends), corporations, philanthropic foundations and other organizations. The mission of University Development is to strengthen relationships with alumni and friends and reconnect them with campus colleagues in their colleges and areas of interest, reach out to alumni and friends living out-of-state to carry the messages of NC State's progress, success, and vision for the future, and to serve as liaisons to university-wide programs to support their fundraising and outreach efforts.

University Development provides services to the colleges and programs in capital campaigns, gift planning, corporate & foundation relations, and annual giving. University Development also facilitates external and internal communication among fundraisers, and coordinates approaches to prospective donors.

The Office of University Communications builds positive relationships between NC State University and its many constituents through strategic internal and external communications that convey the university’s brand identity. The office is comprised of university relations, marketing and creative strategies, web communications, and special events, and focuses on:

- Ensuring consistency in university-wide messaging and visual identity by facilitating integration and coordination of public relations and communications efforts throughout the university
- Monitoring and responding to public issues and perceptions
- Providing marketing, communication and Web strategy, counsel and creative services to campus clients
- Providing guidance and resource assistance for university events
University Administration

History of North Carolina State University

When North Carolina State University was founded in 1887, the school embodied ideals that were rapidly transforming the field of higher education. Chief among them was the belief that colleges should not be reserved for a select few, and that the children of farmers, mechanics and other workers should have access to the opportunities and benefits of higher education.

A new generation of progressive thinkers founded the college, known then as the North Carolina College of Agriculture and Mechanic Arts. No organization did more to advance the cause of this new institution than the Watauga Club (http://www.ncsu.edu/watauga), a reform-minded group of lawyers, teachers, doctors and businessmen in Raleigh — all of them younger than 30. Watauga Club member Charles W. Dabney, who wrote the legislation creating the new institution, exemplified the changes sweeping the South in the 1880s. The son of a Calvinist theologian who professed skepticism of modern science, Dabney earned a Ph.D. in chemistry and built a reputation as one of the foremost agricultural scientists in the nation.

Today we honor NC State’s founders — men like Dabney, William J. Peele and Walter Hines Page — not just for their vision, but also because they lived at a time when considerable foresight, skill and courage were required to rally public support for higher education.

Growth and Extension

NC State was established under the auspices of the federal Morrill Act of 1862, which allowed the U.S. government to donate federally owned land to the states for the purpose of establishing colleges that would teach “agriculture and the mechanic arts.” The brand-new school held its first classes in the fall of 1889 with 72 students, six faculty members and one building.

In the early 1900s, a new federal program sparked an era of outreach work at the college. The 1914 passage of the Smith-Lever Act created an educational partnership between land-grant colleges and the U.S. Department of Agriculture. Under this new cooperative extension program, the colleges would send staff to meet with farmers around the state and provide practical agricultural instruction. This led North Carolina to establish the Cooperative Agricultural Extension Service (http://www.ces.ncsu.edu) at NC State.

New Name, New Focus

By the 1920s, State College (as the school was now known) was beginning to grow beyond its original agricultural and mechanical focus, adding schools of engineering, textiles, education and business, as well as a graduate school. The Depression imposed economic challenges on higher education throughout the nation, and State College was no exception. As the crisis slowly eased, the college renewed its growth, adding students and developing new programs until the onset of World War II.

State College contributed to the war effort by hosting a number of military detachments and training exercises and by refitting the work of several departments and programs to military and defense purposes.

Postwar Boom

The campus experienced unparalleled growth during the postwar years as the G.I. Bill brought thousands of former servicemen to campus. In the following decades, the college continued to expand its curricula, creating schools of design, forestry, physical science and mathematics, and humanities and social sciences. During these years of growth, the name was changed again, this time to North Carolina State University at Raleigh.

The People’s University

The university celebrated its 100th anniversary in 1987, which also saw the creation of Centennial Campus (http://centennial.ncsu.edu), bringing together university and corporate leaders to partner in teaching, research and economic development.

Known as the “People’s University,” NC State has developed into a vital educational and economic resource, with more than 34,000 students and 7,000 faculty and staff. A wealth of university outreach and extension programs continue to provide services and education to all sectors of the state’s economy and its citizens. Consistently ranked a best value (http://www.kiplinger.com/tools/colleges/school.php?id=7794) among the nation’s public universities, NC State — the state’s largest university — is an active, vital part of North Carolina life.

Today, 129 years after its founding, NC State continues to follow its original mission: opening the doors of higher education to the citizens of North Carolina and providing teaching, research and extension that strengthen the state and its economy.

University of North Carolina Board of Governors

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Course Descriptions

The course descriptions are arranged first in alphabetical order according to course prefix reflecting the department or discipline of the course. Some courses are cross-listed, indicating that they are offered in two or more departments or disciplines. Within each of the prefix groups, the course descriptions are arranged by course number. Numbers 100-299 are courses intended primarily for freshmen and sophomores. Numbers 300-499 are courses intended primarily for juniors and seniors; numbers 490-498 are seminar, project, or special topics courses; number 499 is for undergraduate research.

Courses numbered 500 - 600 are taught at the Masters level and most are available to advanced undergraduates. Doctoral courses are numbered 700 - 899. Graduate courses numbered at the 500 and 700 levels are letter graded (A+ through F), while 600 and 800 level courses are S/U graded. Courses regularly letter graded (A+ through F) may not be taken for S/U grading by graduate students. Courses numbered in the 900 series are open to College of Veterinary Medicine students.

A typical course description shows the prefix, number, and title followed by prerequisite, credit and offering information. Prerequisites are courses or levels of achievement that a student is expected to have completed successfully prior to enrolling in a course. Corequisites are courses which should be taken concurrently by students who have not previously completed the corequisites. Prerequisites or corequisites for a given course may be waived by the instructor of the course or section. It is the student's responsibility to satisfy prerequisites, or obtain from the instructor written waiver of prerequisites, for any course in which he or she may enroll. Failure to satisfy prerequisites may result in removal from enrollment in the course. Consent of the department is required for all practicum and individual special topics or special problems courses as well as internships and thesis or dissertation research. Some courses also have restrictive statements, such as “Credit in both MA 141 and MA 131 is not allowed.” Restrictive statements for a given course may be waived only by a college dean.

An example of credit information is: ACC 200 Introduction to Managerial Accounting 3. The 3 indicates the number of semester hours credit awarded for satisfactory completion of the course. Some courses are offered for variable credit, and a listing of 1-6 indicates that from one to six semester hours of credit may be earned as arranged by the department writing the course.

Accounting (ACC)
Adult & Higher Education (EAC)
Advanced Analytics (AA)
Aerospace Studies (AS)
Africana Studies (AFS)
Agricultural and Resource Economics (ARE)

Agricultural Institute (AGI)
Agricultural and Environmental Systems (AES)
Agricultural and Extension Education (AEE)
Agriculture and Life Sciences (ALS)
Animal Science (ANS)
Anthropology (ANT)
Applied Ecology (AEC)
Architecture (ARC)
Art and Design (ADN)
Arts Studies (ARS)
Arts Village (AVS)
Biochemistry (BCH)
Biological Sciences (BIO)
Biological and Agricultural Engineering (BAE)
Biomanufacturing Training Education Center (BEC)
Biomathematics (BMA)
Biomedical Engineering (BME)
Bioprocessing (BBS)
Biotechnology (BIT)
Business Administration (MBA)
Business Management (BUS)
Chemical Engineering (CHE)
Chemistry (CH)
Civil Engineering (CE)
College of Natural Resources (CNR)
College of Sciences (COS)
Communication (COM)
Comparative Biological Science (CBS)
Comparative Literature (CL)
Computer Science (CSC)
Counselor Education (ECD)
Crop Science (CS)
Curriculum and Instruction (ECI)
Dance (DAN)
Design (D)
Design Fundamentals (DF)
Design Studies (DS)
EGR-Engineering Master's (EGR)
Ecology (ECO)
Economics (EC)
Educ Leadership & Program Eval (ELP)
Education (ED)
Educational Psychology (EDP)
Electrical and Computer Engineering (ECE)
Elementary Education (ELM)
Engineering (E)
Engineering - Mechatronics (EGM)
English (ENG)
Entomology (ENT)
Entrepreneurship Initiative (EI)
Entrepreneurship in Music and the Arts (EMA)
Environmental Assessment (EA)
Environmental Science (ES)
Environmental Technology (ET)
Fashion and Textile Design (FTD)
Fashion and Textile Management (FTM)
Feed Mill (FM)
Film Studies (FLM)
Financial Mathematics (FIM)
Fisheries & Wildlife Sciences (FW)
Food Science (FS)
Food Science (FSA)
Foreign Language - Chinese (FLC)
Foreign Language - English (FLE)
Foreign Language - French (FLF)
Foreign Language - German (FLG)
Foreign Language - Greek (GRK)
Foreign Language - Hindi (FLN)
Foreign Language - Italian (FLI)
Foreign Language - Japanese (FLJ)
Foreign Language - Latin (LAT)
Foreign Language - Persian (PER)
Foreign Language - Portuguese (FLP)
Foreign Language - Russian (FLR)
Foreign Language - Spanish (FLS)
Foreign Language-Classical Studies (CLA)
Foreign Languages (FL)
Foreign Languages and Literatures - Arabic (FLA)
Forestry (FOR)
Genetic Engineering and Society (GES)
Genetics (GN)
Geographic Information Systems (GIS)
Geography (GEO)
Global Knowledge (GK)
Global Public Health (GPH)
Graduate Economics (ECG)
Graphic Communications (GC)
Graphic Design (GD)
HESA - Health Exercise Aquatics (HESA)
Health Exercise Studies Dance (HESD)
Health Exercise Studies Emergency Medicine (HESE)
Health Exercise Studies Fitness (HESF)
Health Exercise Studies Outdoor (HESO)
Health Exercise Studies Racquet (HESR)
Health Exercise Studies Specialty (HESS)
Health Exercise Studies Team (HEST)
Health and Exercise Studies Minor (HESM)
History (HI)
History of Art (HA)
Honors (HON)
Horticulture Science (HS)
Humanities and Social Sciences (HSS)
Humanities (HUM)
Humanities and Global Knowledge (HUMG)
Humanities and U.S. Diversity (HUMU)
Immunology (IMM)
Industrial Design (ID)
Industrial and Systems Engineering (ISE)
Interdisciplinary Perspectives (IPGE)
Interdisciplinary Perspectives and Global Knowldg (IPGK)
Interdisciplinary Perspectives and U.S. Diversity (IPUS)
Interdisciplinary Studies (IDS)
International Studies (IS)
International Studies (MIS)
Landscape Architecture (LAR)
Leadership in the Public Sector (LPS)
Liberal Studies (MLS)
Life Sciences First Year (LSC)
Logic (LOG)
Management Innovation Entrepreneurship (MIE)
Management (M)
Marine, Earth, and Atmospheric Sciences (MEA)
Materials Science and Engineering (MSE)
Math & Science Education (EMS)
Math in Agriculture and Related Sciences (MAA)
Mathematical Sciences (MSGE)
Mathematics (MA)
Mechanical & Aerospace Engr (MAE)
Mechanical Engineering Systems (MES)
Medical Textiles (MT)
Microbiology (MB)
Military Science (MS)
Multidisciplinary Studies (MDS)
Music (MUS)
NC Global Training Initiative (GTI)
Natural Resources (NR)
Natural Sciences (NSGE)
Natural Sciences and Global Knowledge (NSGK)
Naval Science (NS)
Nonprofit Studies (NPS)
Nonwovens (NW)
Nuclear Engineering (NE)
Nutrition (NTR)
Occupational Education (EOE)
Operations Research (OR)
Paper Science Engineering (PSE)
Park Scholars (PRK)
Parks, Recreation, and Tourism Management (PRT)
Visual and Performing Arts and U.S. Div (VPUS)
Women's and Gender Studies (WGS)
Wood and Paper Science (WPS)
Youth, Family, and Community Sciences (YFCS)
Zoology (ZO)
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