NC State Graduate Catalog

The Graduate Catalog contains Graduate School requirements and pertinent information for individual graduate programs, a current list of graduate faculty, and a selection of other resources for new students. The Catalog is informational only and is subject to change. Official policies and procedures are in the Graduate Handbook and on the NC State Policies, Rules and Regulations web site.

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This Catalog is intended for informational purposes only and is subject to change. Please see the <u>Graduate Handbook</u> at for changes in policies, rules, regulations, and procedures.

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North Carolina State University

North Carolina State University (NC State) is a national center for research, teaching and extension, and its graduate education has stood for quality for more than a century. As a landgrant state university, it shares the distinctive characteristics of these institutions nationally — broad academic offerings, extensive public service, national and international activities, and large-scale extension and research programs.

NC State is one of 16 constituent institutions of the multi-campus <u>University of North Carolina system</u>. The UNC Board of Governors is the policy-making body legally charged with "the general determination, control, supervision, management, and governance of all affairs, of the constituent institutions."

NC State is a member of the National Association of State Universities and Land-Grant Colleges. It is also a member of the American Council on Education, the College Entrance Examination Board, the Council of Graduate Schools, the National Commission on Accrediting and the Southern Association of Colleges and Schools.

NC State University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award associate's, baccalaureate, master's, and doctoral degrees. Contact the Commission on Colleges 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, or (3) to file a complaint against the institution for alleged non-compliance with a standard or requirement. Normal inquiries about NC State, such as admission requirements, financial aid, educational programs, etc., should be addressed directly to the university and not the Commission's office.

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The Graduate School

Graduate instruction was first offered at North Carolina State University in 1893, and the first doctoral degree was conferred in 1926. In the ensuing years, the Graduate School has grown steadily and now provides instruction and facilities for advanced study and research in the fields of agriculture and life sciences, design, education, engineering, natural resources, humanities and social sciences, management, physical and mathematical sciences, textiles and veterinary medicine.

The Graduate School is currently composed of more than 2,400 graduate faculty members. Educated at major universities throughout the world and established both in advanced teaching and research, these scholars guide the University's more than 7,000 master's and doctoral students from all areas of the U.S. and many other countries. The faculty and students have available exceptional facilities, including libraries, laboratories, modern equipment and special research areas.

Additionally, a cooperative agreement exists among the Graduate Schools of the University of North Carolina at Chapel Hill, the University of North Carolina at Greensboro, Duke University, and North Carolina State University which increases the educational and research possibilities associated with each institution.

Application and Admissions

The criteria used for admissions decisions vary according to programs and schools/colleges, reflect an evaluation of the applicant's potential for graduate work, and consider the ability of a program to accommodate additional students. Commonly, departmental admissions committees consider requests for admission and forward their recommendations to the Graduate School. However, Graduate School regulations govern the criteria for the classification of graduate student status.

Application

All applicants must submit the online NC State University Graduate School Application Form. Application is made for a specific degree program and date of enrollment.

Applications for admission require the following:

- Non-refundable application processing fee of \$75.00 (US) for U.S. citizens and Permanent Residents or \$85.00 (US) for Non-Resident Aliens (Internationals);
- One unofficial transcript from all colleges and universities previously attended; (NOTE: Applicants
 currently attending, or who have previously attended NC State, are not required to provide an NC State
 transcript.)
- Three recommendations from people who know the prospective student's academic record and potential for graduate study;
- On-line North Carolina Residency Form if claiming NC residence for tuition purposes;
- A list of courses in progress if enrolled as a Post-Baccalaureate Studies (PBS) student at NC State;
- GRE or other standardized test scores, statements of purpose, portfolios or other work samples, depending on requirements of particular program; and
- TOEFL scores, where applicable.

English Proficiency Requirements for International Students

In order to be eligible for admission to the graduate study at NCSU all international applicants, regardless of citizenship, must demonstrate proficiency in English at a level necessary to be successful in a graduate program at NC State. This requirement can be met for most applicants in one of the following ways; however, some programs may require additional evidence of English proficiency:

1. Provide <u>Test of English as a Foreign Language</u> (TOEFL) with a total score of **at least 80** on the Internet-based Test (iBT). Minimum test scores for each section:

Listening: 18 points Reading: 18 points Writing: 18 points

Speaking: 18 points for admission, 23 points for TA appointment where TA has direct verbal interactions with

students, 26 points for TA appointment where TA presents lectures in the class or laboratory

The maximum total score for the iBT is 120 with each section worth 30 points.

2. Provide <u>International English Language Testing System</u> (IELTS) scores with an overall band score of at least 6.5. Minimum test scores for each section are listed below:

Listening: 6.5 Reading: 6.5

Writing: 6.5

Speaking: 6.5 for admission, 7.0 for TA appointment

- 3. be a citizen of a country where English is an official language and the language of instruction in higher education; or
- 4. have successfully completed at least one year of full-time study in a degree program at a four-year US College or university.
- 5. TOEFL or IELTS test date must be no older than two years (24 months) prior to the beginning of the requested entry term.

NOTE: The current computer- and paper-based versions of the TOEFL test will be given until the iBT version is implemented in a particular location. Computer-based TOEFL scores must be 213 or higher (with at least 17 on three sections and no section score below 13). The paper-based test requires a score of 550 or higher (with scores of 50 on at least two of the three sections and no section score below 45).

Admission

The procedures followed in evaluating an applicant's potential for success in graduate work and the criteria used for admissions decisions vary according to programs and colleges and reflect an evaluation of the applicant's potential to engage in graduate work and the capability of the individual programs to accommodate additional students. Most programs consider applications as they arrive, while others accumulate applications and make recommendations on admission at certain times during the year. Generally, requests for admission are considered by program admissions committees that forward the program recommendations to the Dean of the Graduate School.

Students are admitted to full or provisional status in a specific degree program. Admission is granted for a specific semester or summer term. Any change in the admission date must be requested in writing and approved by the program and Graduate School. Once the requirements for that degree program have been completed, no further registration as a graduate student will be permitted unless admission to a new graduate classification has been formally approved.

Immunization and Medical History

All graduate students admitted to a degree program are required by State law to submit a report of medical history and immunizations prior to initial registration. Both forms are available online through HealthWeb. This report must document immunization against tetanus/diphtheria, measles, German measles, polio, and for international students, show results of a tuberculin skin test. Graduate students who have recently completed their undergraduate work at NC State must update their medical history. Student Health Services must receive the required reports at least 30 days before registration. If the student does not meet this requirement, dismissal from school is mandatory under the law.

Transcript Requirements

The University requires that official copies of transcripts that document all prior degrees be on file in the student's permanent record at NC State. Students are required to provide the Graduate School with official copies of their latest transcript(s) from all universities (official translation required for non-English transcripts) from which the applicant had any degrees awarded, no later than the last day of classes of the first semester they are enrolled.

Full Graduate Status

To be considered for admission in full graduate standing, an applicant must have a four-year bachelor's degree (or equivalent) from an accredited college or university as determined by a regional or general accrediting agency and must have at least a "B" (3.000/4.000) average in the undergraduate major or in the latest graduate degree program.

Exceptions on standard accreditation may be granted for applications with international degrees, including applicants with three-year degrees from institutions in Europe participating in the <u>Bologna Process</u>. A more complete discussion of the options for handling three-year bachelor's degrees can be <u>found here</u>.

Provisional Status

Students with bachelor's degrees from accredited institutions whose scholastic records are below the standards for admission to full graduate standing may be admitted provisionally when unavoidable, extenuating circumstances affected their undergraduate averages or when progressive improvement in their undergraduate work warrants provisional admission. Students admitted provisionally under these circumstances can attain full graduate standing after completion of nine or more graduate credit hours with a minimum GPA of 3.000. Courses taken for S/U grade cannot be used as part of the minimum.

Provisional admission may be granted to applicants with bachelor's degrees from accredited institutions who lack undergraduate work considered essential for graduate study in a major field. Applicants with bachelor's degrees from non-accredited institutions may be granted provisional admission when their academic records warrant this status.

Full graduate standing is granted when the deficiencies responsible for the provisional status are corrected through additional course work (without graduate credit), provided the student has maintained a satisfactory academic record (3.000 GPA) on all course work taken in a graduate classification. A change from provisional status to full graduate standing is effected only upon the recommendation of the department in which the student is seeking the degree.

A graduate student is not eligible for appointment to an assistantship or fellowship while on provisional status.

Graduate-Unclassified Status

The Graduate-Unclassified status is a temporary classification and students admitted to this status are not candidates for degrees. They may take courses for graduate credit but may not apply more than 12 credits earned while in this status to any program leading to an advanced degree at this institution. Unclassified graduate students are expected to meet the same admissions requirements that apply to graduate students in full standing. Any individual having an interest in applying for admission as a Graduate-Unclassified Student should correspond with the Graduate Dean describing his or her particular interests and objectives prior to making application.

Admission for International Students

International graduate students are admitted to either full-time study in a specific graduate program or into the Graduate-Unclassified category as an international visitor. In addition to admission requirements listed elsewhere for graduate admission, applicants who are not U.S. citizens must complete and submit a Visa Clearance Form and/or a Certificate of Financial Responsibility before a final admission decision can be made. Criteria for international visitors are as follows:

- 1. International student visitors must state their educational objectives at NC State and the time expected to accomplish those objectives (normally one semester or one academic year). The educational objective may not be to seek a graduate degree at NC State.
- 2. They are expected to meet the same minimum academic admission requirements that apply to graduate students in full standing.
- 3. They are expected to meet the same TOEFL requirements that apply to international students who are admitted to master's and doctoral programs if they plan to take courses. If they plan to register for research only, they are not required to take the TOEFL.
- 4. They must be recommended by the DGP of the program in which they plan to take courses or do research. Special admission status may apply for a period not to exceed one year.
- 5. They may hold a research assistantship but may not hold a teaching assistantship (provided their nonimmigrant status allows on-campus employment).
- 6. They will not be eligible for the Graduate Student Support Plan.
- 7. Those in F-1 or J-1 status must maintain full-time enrollment and all other requirements based on their particular nonimmigrant status.

Post-Baccalaureate Studies (PBS)

The <u>Post-Baccalaureate Studies</u> (PBS) classification is designed for U.S. citizens or permanent residents who wish to undertake academic work beyond the bachelor's degree but who are not currently admitted to a degree program. This classification is not open to international students with the exception of the spouse of a regularly enrolled NC State student. In special cases where students are sponsored by an agency of the U.S. government for specialized, non-degree study, approval may be given by the Graduate School for registration in the PBS classification. The following rules apply to students who wish to register for PBS.

Please note that the following are university minimum requirements. Some departments may have more restrictive requirements.

- 1. All must have bachelor's degrees from accredited institutions of higher education. Registration is through Registration and Records.
- All classes taken for credit by PBS students will be graded in the usual manner that applies for the
 particular course (A+ through F or S/U). All courses taken at NC State will appear on the student's
 transcript.
- 3. If the student is admitted as a graduate student, a maximum of 12 hours may apply toward the minimum university requirement of the master's degree (i.e., 30 credit hours) for which the student is enrolled, including hours approved for graduate credit while classified as a senior or unclassified graduate. The first 12 hours of course work taken at the graduate level in the PBS category will be accepted toward degree requirements unless a request for some other combination of 12 hours is made by the student's advisory committee and approved by the Graduate Dean. A maximum of 12 credit hours taken while in PBS status may be transferred into a doctoral degree program.
- 4. If a student's graduate degree is terminated, he/she cannot use courses taken in PBS status after termination for credit toward the same graduate degree program.

- 5. The grade point average (GPA) of a graduate student who has credits in the PBS category will be based on all courses taken at the 400-800 level. However, no course taken six (6) years prior to graduation from a program can be used to meet the requirements for a later graduate degree at NC State.
- 6. Registration is limited to a maximum of two courses per semester. Individuals who are employed full-time should limit their PBS registrations to one course per semester.
- 7. The PBS classification carries with it no implication that the student will be admitted to the Graduate School in any degree classification.
- 8. All course work accepted for degree credit must be approved by the student's advisory committee as being germane to the program. Requests for degree credit for courses completed in the PBS classification are considered after admission to a graduate degree program when the student's Plan of Graduate Work is filed with the Graduate School.
- 9. PBS students are expected to familiarize themselves with Graduate School and departmental policies and to seek further advice or clarification as needed.

Distance Education

Distance learning offers you the opportunity to participate in a different learning environment by allowing students to have instruction off campus. Valuable learning time is gained by providing an educational environment that increases accessibility and flexibility for learners.

NC State's distance learning includes some Internet-based courses, but also offers study through the use of videotape, cable TV, interactive TV, satellite, and independent study programs. In addition, <u>Distance Education</u> courses require more writing than in a traditional classroom setting via electronic participation. On-line discussions and e-mail communications allow regular involvement by all students, not just a few.

Distance Education Programs

NC State offers credit courses on a vast number of subjects, with more than 100 individual distance education courses to choose from in the humanities, engineering, social sciences, textiles, physical sciences, and more.

Degree programs require admission to the university. Since each program sets its own admission requirements, students should contact the program of their interest for details. A full listing of programs is available on the Distance Education website.

Professional development courses are also available through Distance Education; all are for-credit offerings designed to meet the professional development needs of specific audiences. No admission to the university is required.

Other options include non-credit and continuing education programs such as short courses, computer training, or customized programs for businesses and other groups. No admission to the university is required to enroll in these programs.

(Note: There may be additional fees associated with student identity verification for distance education students who take remotely proctored exams.).

Evening Degree Programs

Some graduate degree programs offer late afternoon and evening courses for students who are unable to attend classes during the day. These students may also have the option of earning their degree through <u>Distance</u> <u>Education</u>. For further information about these programs, students should contact the specific department.

Alternative Teacher Education Programs

Alternative teacher education programs are for people with a desire to teach in elementary, middle, or high schools but do not have an undergraduate degree in education. Please note that all alternative licensure programs at NC State require a minimum GPA of 2.500 and a four-year degree from an accredited college or university. There are two types of alternative licensure: licensure only and lateral entry.

Licensure only programs are for people who want to complete their teaching license ("A"-level) before entering the classroom. These programs include education coursework, content-specific coursework, and student teaching.

Lateral entry programs are for people who want to work on their coursework while teaching full-time. Lateral entry programs include education coursework, content-specific coursework, and a one-hour practicum in place of student teaching. Participants in lateral entry programs will receive a lateral entry license when they are hired in a teaching position and then will be recommended for a clear ("A"-level) license upon completion of the lateral entry program. NC TEACH is not a graduate program. The NC TEACH program is an intensive one-year program in which participants enter as a cohort and are provided with an extensive support network to aid their transition into the classroom.

Also see Teacher Licensure programs offered through Distance Education.

Graduate Programs

The Graduate School offers programs of study leading to both master's and doctoral degrees. Graduate education is the final stage in the development of intellectual independence. It is different from undergraduate education in that the student is encouraged to establish premises, to hypothesize and to defend both the procedure and the conclusions of independent investigation. Emphasis is placed upon the student's scholarly development through formal course work, seminars, research and independent investigation.

Each student's program is planned with an advisory committee of graduate faculty members to provide the opportunity for gaining advanced knowledge in the particular field of study. It is the responsibility of ALL graduate students to know and understand their degree requirements. Students are responsible for the fulfillment of those requirements.

Master's Degree Programs

Master of Science and Master of Arts

All Master of Science and Master of Arts degree programs are planned with the objective of making possible a reasonable, comprehensive mastery of the subject matter in a chosen field. In most cases, the Master of Science and Master of Arts programs provide training and experience in research in order to familiarize the student with the methods, ideals and goals of independent investigation. In these cases, representative of most Master of Science and Master of Arts degree programs, a thesis is required. A small number of Master of Science and Master of Arts programs do not require a thesis.

Requirements

- 1. A minimum of 30 semester hours of graduate work in the degree program, unless the specific program requires more hours. (See also Credit Hour Requirements for Master's Degrees in the Graduate Handbook.)
- 2. A reading knowledge of a foreign language (in a few programs)
- 3. A comprehensive written examination (in some programs)
- 4. A thesis (in most programs)
- 5. A comprehensive oral examination (except Option B programs)

Time Limit

Requirements for ALL master's degrees must be completed within six (6) calendar years. For further information about the time limit for degrees, please see Graduate Handbook Section 3.4.

Master's Degree in a Designated Field

A number of departments and programs offer master's degrees in designated fields. These are professional degrees and do not require a thesis.

Requirements

- 1. A minimum of 30 semester hours of graduate work in the degree program (unless the specific program requires more hours).
- 2. A comprehensive written examination (in some programs)
- 3. A comprehensive oral examination (except Option B programs)

Option B Master's Degree

The Option B Master's degree requires that students adhere to the general guidelines for a Master of Arts or Master of Science degree with the following exceptions:

- 1. A comprehensive oral exam is not required
- 2. A thesis is not required
- 3. Departmental research credit hours will not be included as part of the course work
- 4. Individual departments define other requirements for their Option B program, such as additional course work or final projects
- 5. Option B Master's degree programs may not carry an officially designated minor
- 6. Students have a single assigned advisor rather than an advisory committee.

Transfer Credits

Transfer of graduate credits earned at other universities

A course that was completed at another college or university may be considered for transfer to a master's program provided that (1) the course is classified as a graduate course; (2) it was completed while the student was in a graduate or post-baccalaureate classification; (3) it was not taken as part of a previous master's degree program at another institution; (4) the grade in the course is B or better (courses with grades of B- or lower will not be allowed to transfer); and (5) the college or university is accredited by one of the following six U.S. regional accrediting agencies: the Southern Association of Colleges and Schools, the Middle States Association of Colleges and Schools, the North Central Association of Colleges and Schools, the Northwest Association of Colleges and Schools, or the Western Association of Colleges and Schools.

Transfer of graduate credits earned while enrolled in an undergraduate program at NC State University

A course that was completed while the student was enrolled as an undergraduate at NC State University may be considered for transfer to a master's program provided that (1) it is at the 400 level or higher; (2) the grade is B or better (courses with grades of B- or lower will not be allowed to transfer); (3) it was not counted to fulfill undergraduate requirements; and (4) it is recommended by the Director of Graduate Programs at the time of the student's enrollment in the Graduate School. Students admitted to the Accelerated Bachelor's/Master's program may use up to 12 hours of graduate credit to satisfy requirements for both the bachelor's and the master's degrees. No graduate credit will be allowed for a course completed in an undergraduate classification at another institution.

Transfer of graduate credits earned while enrolled in a previous graduate degree program at NC State University A graduate course that was completed while the student was enrolled in a previous graduate program at NC State University may be considered for transfer to a master's program provided that (1) it is at the 500 level or higher; and (2) the grade is B or better (courses with grades of B- or lower will not be allowed to transfer).

Transfer of Post-Baccalaureate Studies (PBS) graduate credits earned at NC State University

A graduate course that was completed while the student was enrolled in PBS status at NC State University may be considered for transfer to a master's program provided that (1) it is at the 500 level or higher; and (2) the grade is B or better (courses with grades of B- or lower will not be allowed to transfer). All PBS credits that are used to satisfy requirements of a specific master's degree must be earned before the student is admitted to that degree program. A maximum of 12 credit hours taken while in PBS status may be transferred into a master's degree program. If a student's graduate degree program is terminated, he/she cannot use courses taken in PBS status after termination for credit toward the same graduate degree program.

Advisor and Advisory Committee

All students in graduate programs must have a graduate advisor who is a member of the graduate faculty in the student's major program and is appointed by the Dean of the Graduate School upon recommendation of the Director of Graduate Programs (DGP). In the case of master's programs requiring theses and/or final oral examinations, the graduate advisor serves as chair or co-chair of the committee.

The primary function of the committee is to advise the student in all aspects of the educational program and to monitor and evaluate that student's progress toward the degree. The committee should provide an intellectually stimulating foundation for the student's professional and scholarly development and should be sensitive to any difficulties in the student's progress, research performance or methodology requiring attention. The committee certifies whether the student has met NC State's standards for a graduate degree. Advising and guiding the student on how best to qualify for the requirements of a degree is a key part of this responsibility.

In all master's programs except those designated "Option B," the committee will consist of at least three NC State Graduate Faculty members, one of whom is designated as chair and one of whom represents the minor if one has been declared. Those master's programs designated "Option B" require that the student choose only a major advisor or co-advisors but no committee.

Plan of Work

Master's students are required to submit a conditional Plan of Work (POW) in consultation with their advisor/advisory committee by the time they have completed one half of the credits required for the degree. The POW is submitted online through MyPack Portal.

The final POW submitted to the Graduate School must be approved by (1) members of the advisory committee for programs with a required thesis, or the major professor for Option B students; and (2) the Director of the Graduate Program. The approved POW must be submitted electronically by the DGP to the Graduate School.

Language Requirement

Requirements for Master of Arts and Master of Science Students

A reading knowledge of one modern foreign language (Germanic, Romance or Slavic) is required by some programs for the Master of Science and Master of Arts degrees. Other programs may designate that the language requirement be filled from among those languages in which the Department of Foreign Languages and Literatures conducts testing. Students should contact the major program for specific language requirements.

Master's Degrees in Designated Fields

There is no language requirement in the professional master's degree programs (master's degrees in designated fields) with the exception of the Master's of International Studies, which requires knowledge of one foreign language at a level of conversational proficiency.

Minor

The Graduate School does not require a minor, though individual programs may require one. If a program does not require a minor, the graduate student has the option of choosing one, except in an Option B Master's program. The minor work will usually be from a single discipline or field that in the judgment of the advisory committee provides relevant support to the major field. However, the committee has the alternative of developing an interdisciplinary minor if it best serves the needs of the student. When a student does select a minor, the advisory committee must include a representative of the minor field. The minor credits on the Plan of Graduate Work must

be approved by the graduate advisory committee member representing the minor, and, in some cases, the DGP from the minor program.

Co-Major

Students may co-major at the master's level in programs with identical degrees, although the degrees do not necessarily have to have identical requirements, e.g., two master of science programs, one with a thesis requirement and one without. Students must obtain the approval of both graduate programs as well as appropriate representation on the advisory committee, and must meet all requirements of both programs. Students who co-major are not required to declare a minor. Co-majors must meet all requirements for majors in both programs. One degree is awarded and the co-major is noted on the transcript.

Comprehensive Examination

Written Examination

Written examinations covering the subject matter of the major and the minor may be required. Information concerning written examination schedules should be obtained from the student's program.

Oral Examination

Candidates for master's degrees, except those in Option B programs, must pass a comprehensive oral examination to demonstrate to the advisory committee that he/she possesses a reasonable mastery of the subject matter of the major and minor fields and that this knowledge can be used with promptness and accuracy. This exam takes the form of a traditional defense of the thesis in those programs requiring theses. In programs that require a thesis, the thesis must be submitted in complete form, except for such revisions which may be necessary as a result of the final oral exam, to all members of the advisory committee at least two (2) weeks prior to the exam.

Failure of a student to pass the oral examination terminates the student's graduate work at NC State unless the graduate advisory committee unanimously requests that the Graduate School permit a re-examination. Only one re-examination will be given.

Oral examinations where one or more of the participants are located remotely from the others may occasionally become necessary, but they should never be normal practice. If such circumstances arise, please see Section 3.6 of the Graduate Handbook for rules requesting and conducting a remote exam.

Thesis

Candidates for the Master of Arts or Master of Science degrees in programs requiring a thesis must undertake an original investigation into a subject, which has been approved by the student's advisory committee and Director of Graduate Programs, and prepare a thesis. Information on form and organization of the thesis, in addition to other regulations, is presented in the Graduate School's <u>Electronic Thesis and Dissertation Guide</u>.

Time Limit

All requirements for the master's degree must be completed within six calendar years, beginning with the date the student commences courses carrying graduate credit applicable to the degree program, unless a more restrictive time limit has been established by the academic college/school or program. The term limit remains at six (6) years even if a student was on approved leave of absence during the six-year period. For further information about the time limit for degrees, please see Graduate Handbook Section 3.4.

Summary of Master's Procedures

All Master's Students

- 1. Application materials and required fees received.
- 2. Application materials reviewed by graduate program.
- 3. Graduate program forwards recommendation regarding applicant's admissibility to the Dean of the Graduate School.
- 4. The Dean of the Graduate School reviews the recommendation and the student is notified of the action taken on the request for admission.
- 5. Outstanding transcripts, if any, showing any or all post-secondary coursework attempted and degree(s) conferred since application should be submitted by student to the Graduate School, prior to matriculation.
- 6. Student arrives, reports to the graduate program, is assigned a graduate advisor and develops a roster of courses and credits with the advisor.
- 7. Student subject to continuous registration policy until graduation.
- 8. Student approves Patent Agreement via Student Self-Service in the MyPack portal.
- 9. Student develops a Plan of Graduate Work, in consultation with and the approval of his/her graduate advisor and Director of Graduate Programs (DGP). The Plan of Work must be submitted via SIS to the Graduate School, where graduate records staff will review it and advise the program of any changes that need to be made before the Request for a Permit to Schedule the Master's Oral Examination or Request for Option B Graduation Checkout can be approved by the Graduate School.
- 10. Student passes language examination, if required.
- 11. Student passes written examination, if required.
- 12. Student submits Diploma Order Request form by end of third week of the semester or summer session of anticipated graduation.
- 13. A GPA of at least 3.000 for the degree requirements as well as on overall graduate course work at NC State is required for graduation.
- 14. All degree requirements must be completed within six calendar years, beginning with the date the student takes courses carrying graduate credit applicable to the degree program, unless a more restrictive time limit has been established by the program or academic college/school.

Students in Thesis Programs

- 1. Graduate advisory committee of three or more graduate faculty members is appointed by the DGP.
- 2. A preliminary copy of the thesis is submitted to the chair of the student's advisory committee.
- 3. When all requirements except completion of the course work in the final semester are satisfied and after the thesis is complete except for such revisions as may be necessary as a result of the exam, the DGP submits to the Graduate School the Request for a Permit to Schedule the Master's Oral Examination.
- 4. If Graduate School requirements are met, the Request for a Permit to Schedule the Master's Oral Examination is approved by the Graduate School within 10 working days of receipt of the request, and the permit, Admission to the Final Master's Oral Examination, is issued.
- 5. At least two weeks prior to the final oral examination, the chair of the student's advisory committee submits the thesis, if required, to the other members of the advisory committee for review.
- 6. Final examination is scheduled and conducted.
- 7. The Admission to the Final Master's Oral Examination form is completed by the committee members, including date and result, and submitted to the Graduate School by the DGP. The Graduate School should receive the report within five working days of the examination.
- 8. Student submits three copies of the thesis, signed by each member of his/her advisory committee, to the Graduate School.

- 9. The deadline for submitting the thesis to the Graduate School in order for the student to graduate in a given semester or summer session appears in the Graduate School Calendar.
- 10. The thesis is reviewed by the Graduate School to ensure that the format conforms to the specifications prescribed in the Thesis and Dissertation Guide.

Students in Master's of Discipline Non-Thesis Programs

- 1. Graduate advisory committee of three or more graduate faculty members is appointed by the DGP.
- 2. When all requirements except completion of the course work in the final semester are satisfied, DGP submits to the Graduate School the Request for a Permit to Schedule the Master's Oral Examination.
- 3. If Graduate School requirements are met, a Request for a Permit to Schedule the Master's Oral Examination is approved by the Graduate School within 10 working days of receipt of the request and the permit, Admission to the Final Master's Oral Examination, is issued.
- 4. Final examination is scheduled and conducted.
- 5. Final examination report, including date and result of the examination, submitted to the Graduate School by the DGP. The Graduate School should receive the report within five working days of the examination.
- 6. The deadline date for unconditionally passing the final examination in order for the student to graduate in a given semester or summer session appears in the Graduate School Calendar.

Students in Option B Programs

DGP submits requests for graduation checkout to the Graduate Dean no later than six weeks after the first day of the semester (seven working days after the first day of the summer session) in which the student is taking the last course in his or her program and anticipates graduation.

Doctoral Degree Programs

Doctor of Philosophy and Doctor of Education Degrees

The doctorate symbolizes the ability of the recipient to undertake original research and scholarly work at the highest levels without supervision. The degree is therefore not granted simply upon completion of a stated amount of course work but rather upon demonstration by the student of a comprehensive knowledge and high attainment in scholarship in a specialized field of study. The student must demonstrate this ability by writing a dissertation reporting the results of an original investigation and by passing a series of comprehensive preliminary examinations in the field of specialization and related areas of knowledge, and successfully defending the dissertation.

Requirements

- 1. At least two residence credit points secured in continuous semesters' residence as a graduate student at the University.
- 2. Doctoral degrees at North Carolina State University require a minimum of 72 graduate credit hours beyond the bachelor's degree. For a student who has a master's degree from a university other than NC State, a maximum of 18 hours of relevant graduate credit from the master's degree may be applied toward this minimum, upon the recommendation of the student's Graduate Advisory Committee. If a student completes a master's degree at NC State and continues for a doctoral degree without a break in time, up to 36 credit hours taken while in master's status may be used to meet minimum requirements for the doctoral degree.
- 3. A preliminary comprehensive examination (written and oral components)
- 4. A dissertation
- 5. A final comprehensive oral examination
- 6. Dissertation defense.

Residence Credits

A student working toward a doctoral degree is expected to be registered for graduate work at NC State for at least six (6) semesters beyond the bachelor's degree. The University has basic residence requirements, as defined below, but the academic schools/colleges have the prerogative of establishing more restrictive requirements within the respective schools/colleges. Residence credit is determined by the number of semester hours of graduate work carried during a regular semester.

The Plan of Work should include both a list of the course work to be undertaken (in all programs) and the dissertation topic; be developed by the student and his/her advisory committee; be approved by the committee and the Director of Graduate Programs or Department Head prior to submission to the Graduate School for final approval; be submitted prior to completion of 12 hours of a doctoral program.

At least two residence credits are necessary in continuous residence (registration in consecutive semesters) as a graduate student at the University, but failure to take courses in the summer does not break continuity.

Semester Credits (Hours)	Residence Credits
9 or more	1
6-8	2/3
less than 6 (including registration in 590, 690 series)	1/3

Summer Residency

Summer course work, however, can be used in partial fulfillment of this requirement. A single summer session is equal to one-half of the corresponding amount for a regular semester. For example, six semester hours carried during a summer session will earn one-third of a residence credit; less than six credit hours will earn one-sixth of a residence credit.

Advisor and Advisory Committee

All students in graduate programs must have a graduate advisor who is a member of the Graduate Faculty in the student's major program and is appointed by the Dean of the Graduate School upon recommendation of the DGP. The graduate advisor serves as chair or co-chair of the committee.

The primary function of the committee is to advise the student in all aspects of the educational program and to monitor and evaluate that student's progress toward the degree. The committee should provide an intellectually stimulating foundation for the student's professional and scholarly development and should be sensitive to any difficulties in the student's progress, research performance or methodology requiring attention. The committee certifies whether the student has met NC State's standards for a graduate degree. Advising and guiding the student on how best to qualify for the requirements of a degree is a key part of this responsibility.

A doctoral student's committee will consist of at least four NC State graduate faculty members, one of whom represents the minor field if a minor has been declared. The committee is indicated on the Plan of Graduate Work. In this way, the committee is officially recommended by the DGP, and must be approved by the Graduate School at the time of the approval of the Plan of Graduate Work.

Plan of Work

Doctoral students are required to complete a Plan of Work (POW) in consultation with their advisors. The POW is submitted online through MyPack Portal. The doctoral POW, including the courses to be undertaken in the student's program and the dissertation topic, should be prepared by the doctoral student and his/her advisory committee and submitted electronically to the Graduate School. The POW as a whole should be rationally unified, with all constituent parts contributing to an organized plan of study and research, and courses must be selected from groups embracing one principal subject of concentration, the major, with the option of designating courses in a cognate field, the minor. When a student elects to designate a minor, he/she should select the minor course work from a discipline or field that, in the judgment of the advisory committee, provides relevant support to the major field.

The POW should include both a list of the course work to be undertaken (in all programs) and the dissertation topic; be developed by the student and his/her advisory committee; be approved by the committee and the Director of Graduate Programs or Department Head prior to submission to the Graduate School for final approval; be submitted prior to completion of 12 hours of a doctoral program.

Co-Major

Students may co-major at the doctoral level with the approval of both programs and with the appointment of a co-chair from each program on the advisory committee. The co-chairs will have equal responsibilities for directing and mentoring the student. Co-majors are not permitted between Doctor of Philosophy and Doctor of Education degree programs. Co-majors must meet all requirements for majors in both programs. One degree is awarded and the co-major is noted on the transcript.

Candidacy

A doctoral student is admitted to candidacy by the Graduate School upon passing the preliminary examinations without conditions or after fulfilling any conditions specified by the advisory committee.

Comprehensive Examinations

Preliminary Examinations

Each doctoral student is required to take preliminary or comprehensive examinations, consisting of written examinations and an oral examination, not earlier than the end of the second year of graduate study and not later than one semester (four months) before the final oral examination.

Written examination questions may cover any phase of the course work taken by the student during graduate study or any subject logically related to an understanding of the subject matter in the major and minor areas of study. The questions are designed to measure the student's mastery of his/her field and the adequacy of preparation for research. Committee members must notify the Director of Graduate Programs when a student has completed the written examination. Failure to pass the written portion terminates the student's work at this institution, subject to departmental and/or school/college policies with respect to reexamination.

Upon satisfactory completion of the written portion of the preliminary examinations and after completion of all course work relevant to the examination, the student submits a Request to Schedule the Doctoral Oral Examination, indicating that he/she wishes to schedule the preliminary examination.

The preliminary oral examination is conducted by the student's advisory committee and the Graduate School Representative and is open to all graduate faculty members. The Graduate School will notify the student and the

examining committee. The oral examination is designed to test the student's ability to relate factual knowledge to specific circumstances, to use this knowledge with accuracy and promptness and to demonstrate a comprehensive understanding of the field of specialization and related areas.

A unanimous vote of approval by the members of the advisory committee is required for the student to pass the preliminary oral examination. Approval may be conditioned, however, on the successful completion of additional work in some particular field(s). All committee actions may be appealed by written application to the Graduate Dean (refer to NC State policy on grievance procedures for students).

Failure to pass the preliminary oral examination terminates the student's work at this institution unless the examining committee recommends a reexamination. No reexamination may be given until at least one full semester has elapsed, and only one reexamination is permitted in a given doctoral program.

Final Oral Examination

As with the preliminary oral examination, the chair of the student's advisory committee is in charge of conducting the final oral examination. The final oral examination is scheduled after the dissertation is complete except for such revisions as may be necessary as a result of the examination, but not earlier than four calendar months after admission to candidacy and not before all required course work has been completed or is currently in progress.

The examination consists of the candidate's defense of the methodology used, the data collected, and the conclusions reached in the research, as reported in the dissertation. It is conducted by an examining committee, which consists of the student's advisory committee and a Graduate School Representative. This examination is open to the University community.

While the chair has the option of allowing visitors to ask questions of the candidate, the chair also has the obligation to maintain a scholarly atmosphere and to keep the student's best interest foremost. Graduate faculty members who are not on the advisory committee will have the opportunity to express their opinions to the committee in the absence of the student. However, the final deliberations and the vote are private to the examining committee.

A unanimous vote of approval of the advisory committee is required for passing the final oral examination. Approval may be conditioned, however, on the student's meeting specific requirements prescribed by the student's advisory committee. Failure of a student to pass the examination terminates his or her work at this institution unless the advisory committee recommends a reexamination. No reexamination may be given until one full semester has elapsed and only one reexamination is permitted.

Oral examinations where one or more of the participants are located remotely from the others may occasionally become necessary, but they should never be normal practice. If such circumstances arise, please see Section 3.6 of the Graduate Handbook for rules for requesting and conducting a remote exam.

Dissertation

The doctoral dissertation is the document presenting the results of the student's original investigation in the field of primary interest. It must represent a contribution to knowledge, adequately supported by data, and be written in a manner consistent with the highest standards of scholarship. Publication is expected and encouraged.

The dissertation will be reviewed by all members of the advisory committee and must receive their approval prior to submission to the Graduate School. Information on the required form and organization of the dissertation, in addition to other regulations, is presented in the Graduate School's <u>Electronic Thesis and Dissertation Guide</u>. At the time of the dissertation's submission to the Graduate School, the student is also required to submit one copy each of the Survey of Earned Doctorate form and University Microfilms International Agreement form and to

complete a brief, standard questionnaire about his or her experience as a graduate student at NC State. The University also requires that all doctoral dissertations be microfilmed by University Microfilms International, Ann Arbor, MI, including the publication of the abstract in Dissertation Abstracts International. The student pays the cost of this service.

Time Limit

Doctoral students must attain candidacy for the degree within six (6) calendar years. All degree requirements must be completed within 10 calendar years. For further information about the time limit for degrees, please see Graduate Handbook Section 3.4.

Summary of Doctoral Procedures

- Application materials and required fee received.
- 2. Application materials reviewed by graduate program.
- 3. Graduate program forwards recommendation regarding applicant's admissibility to Graduate Dean.
- 4. The graduate program's recommendation is reviewed and the student is notified of the action taken on the request for admission.
- Outstanding transcripts, if any, showing any or all post-secondary coursework attempted and degree(s)
 conferred since application should be submitted by student to the Graduate School, prior to
 matriculation.
- If admitted, the student arrives, reports to the graduate program, is assigned an advisor and makes out a roster of courses in consultation with the departmental advisor and Director of Graduate Programs (DGP).
- 7. Advisory committee of at least four NC State Graduate Faculty members, one of whom is designated as the chair and one of whom represents the minor field (where appropriate), is appointed by the Graduate Dean upon the recommendation of the DGP. The Graduate Dean also selects a graduate faculty member to serve as the Graduate School Representative on the student's committee.
- 8. Student approves Patent Agreement via Student Self-Service in the MyPack portal.
- 9. A dissertation subject is selected and an outline of the proposed research is submitted to the student's advisory committee and the DGP for review and approval.
- 10. Plan of Graduate Work is prepared by the advisory committee with the student, is approved by the DGP, and is submitted to the Graduate School for approval as soon as feasible after completion of 12 hours of course work.
- 11. Written examinations in the major and minor fields are scheduled no earlier than the end of the second year of graduate study and not later than one semester before the final oral examination. The results of these examinations will be reported to the Graduate School.
- 12. When all written examinations have been completed satisfactorily, the chair submits the Request for Approval to Schedule the Doctoral Oral Examination, designating the preliminary oral examination, at least two weeks prior to the suggested date. Upon approval of the request, the student and examining committee are notified of the time and place. The DGP sends the report of the exam to the Graduate School and if the exam is passed without conditions, the student is admitted to candidacy.
- 13. A copy of the preliminary draft of the dissertation is submitted to the chair of the student's advisory committee for review.
- 14. The Diploma Order Request Form must be filed with the Graduate School by the end of the sixth week of the semester or summer session of anticipated graduation. Failure to submit the form by this date may result in the student's failure to receive the diploma at graduation.
- 15. At least two weeks prior to the final oral examination, the chair of the student's advisory committee submits the dissertation to advisory committee members for review.
- 16. Four calendar months after admission to candidacy or later, and after the dissertation is complete except for such revisions as may be necessary as a result of the final exam, the chair submits to the Graduate School the Request for Approval to Schedule the Doctoral Oral Examination, designating a request for permission for the candidate to take the final oral exam. Requests should be filed at least two weeks

- before the date of the examination. Upon approval of the request, the student and the examining committee, including a Graduate School representative, are notified of the time and place of the examination. The Graduate School Representative receives a copy of the dissertation at least one week prior to the examination.
- 17. The Graduate School requires that all theses and dissertations be properly submitted electronically following the requirements in the Electronic Thesis and Dissertation (ETD) website. Specific deadlines for each semester, as well as formatting requirements, are posted in the online Thesis and Dissertation Guide, located on the ETD website.
- 18. The dissertation is reviewed by the Graduate School to ensure that the format conforms to the specifications prescribed in the Thesis and Dissertation Guide.
- 19. All students must apply to graduate before the semester deadline via MyPack Portal in order to be placed on the graduation list, have the name printed in the graduate programs, have the diploma ordered and the transcript posted.
- 20. All course work scheduled in a graduate degree classification must be completed prior to graduation.
- 21. A GPA of at least 3.000 is required for graduation.
- 22. All degree requirements must be completed within 10 calendar years, beginning with the date the student commences courses carrying graduate credit applicable to the degree program, unless a more restrictive time limit has been established by the program or academic college/school.

Registration

The <u>Department of Registration and Records</u> must have authorization from the Graduate School before a graduate student in any classification will be permitted to register for classes. This authorization will be sent to the Department of Registration and Records at the time the student is notified of acceptance for graduate study. All students attending classes must be registered for credit or audit. Grade records are furnished the students at the end of each scheduled school term.

Full-Time/Part-Time Determination for All Graduate Students

NC State uses a uniform Academic Load Schedule of Full-Time Status of Graduate Students for Loan Deferment, Financial Aid, Visa Status, Payroll Tax Withholding, Graduate Student Support Plan Eligibility and Veteran's Benefits Purposes. This schedule will be the only resource used to determine a student's status for these purposes. These definitions apply to all graduate students, U.S. and international, participants and non-participants in the Graduate Student Support Plan. (updated on July 15, 2014)

Fall and Spring Semesters

Graduate students enrolled in degree plans requiring a thesis or dissertation

Full Time

These students will be full time if they take at least 9 hours per semester until the semester in which a course load of less than 9 credit hours will reach an accumulated total equal to the minimum number of hours required by their program. They should then register for that number of credits, but not less than 3. From that point on, they will continue to be considered full time until they complete their thesis or dissertation, as long as they enroll for at least 3 credit hours.

Half Time

Should a graduate student in a plan requiring a thesis or dissertation fail to maintain full-time status in any given term, as here defined, they are subject to the requirements governing students in non thesis or dissertation plans (as outlined below) in order to be certified as "Half Time".

Graduate students enrolled in degree plans not requiring a thesis or dissertation (1)

Full Time

These students will be full time if they take at least 9 hours in a given semester.

Half Time

These students will be half time if they take at least 4.5 hours per semester.

(1) Master's students enrolled in plans allowing both a thesis and a non-thesis option will be classified as "non-thesis" students and subject to these rules until such time as a graduate plan of work designating the thesis-option, is approved by the Graduate School.

Co-op Students

Co-op students registered for COP 500 will be considered full time. Students registered for only COP 501 will be considered half time.

Summer Sessions

Graduate students are not required by the University to be registered during the summer. However, students who receive a stipend but who are not enrolled in the University during a period of five weeks or more are subject to Social Security tax withholding. In particular, this means that Social Security taxes will be withheld from the

paychecks of Graduate Research Assistants (RAs) who do not register in the summer. Specifically, Social Security taxes will be withheld in June for RAs who are not registered in Summer Session I and in July for RAs who are not registered in Summer Session II. The source of funds that pays the stipend must pay the same amount of Social Security tax as is withheld from the student's paycheck during these months.

Two special registration categories are available for Graduate Research Assistants who would not otherwise take courses in the summer: XYZ 696 (Summer Thesis Research) and XYZ 896 (Summer Dissertation Research), where XYZ represents the course prefix of a specific department or program. Each of these courses is for 1 hour of credit, with registration for 10 weeks, beginning the first day of Summer Session I. Social Security taxes will not be withheld from the June or July paychecks of RAs who register for either 696 or 896. Full time in the summer is a minimum of 1 hour.

Please note that student who are not registered during the summer do not have access to financial aid during that period, nor do they have access to the Student Health Service unless they pay the student health fee for each of the two summer sessions.

Waiver of Hours

Graduate students who meet certain prescribed special conditions, may be certified as either a full-time or half-time in cases where they do not meet the requirements for such as outlined above. A waiver of the uniform academic load rules requires attestation on behalf of the student by their committee chair, academic advisor or the Director of their graduate program and approval by the University.

Accelerated Bachelors/Masters Degree Program

The objective of the Accelerated Bachelors/Master's (ABM) degree program is to provide a means by which exceptional undergraduate students at NC State may complete the requirements for both the bachelor's and masters degrees at an accelerated pace. It provides an opportunity for exceptional undergraduate students at NC State to double count up to 12 graduate-level credits (500 or 700 level) and obtain a non-thesis master's degree within 12 months of completing the bachelor's degree or obtain a thesis based master's degree within 24 months of completing the bachelor's degree.

Students interested in the ABM Program should contact their department.

Continuous Registration

After a student is admitted to the Graduate School and enrolls for the first time, she/he is required to maintain continuous registration, i.e., be enrolled each semester, excluding summer sessions, until she/he has either graduated or her/his graduate program at NC State has been terminated. All students who graduate during the second summer session must be registered for either the first or second summer session.

Leave of Absence

A student in good academic standing who must interrupt her/his graduate program for good reasons may request a leave of absence from graduate study for a definite period of time not to exceed one year within a given graduate program. The request should be made at least one month prior to the term involved. Upon endorsement of the request by the student's graduate advisory committee and Director of Graduate Programs, and approval by the Graduate School, the student would not be required to be registered during the leave of absence. The time that the student spends on an approved leave of absence will be included in the time allowed to complete the degree, i.e., six (6) years for master's and ten (10) for doctoral.

Termination

Graduate students whose programs have been terminated because of failure to maintain continuous registration

and who have not been granted a leave of absence during a fall or spring semester will be required to reapply for admission, and pay the admission fee (\$65.00 for US Citizens and Permanent Residents or \$75.00 for Non-Resident Aliens [Internationals]), if they wish to resume their graduate studies at NC State.

Adding Courses

Courses may be added during the first week of a semester, via MyPack Portal alone, or during the second week, via MyPack Portal and with permission of the instructor. In a summer session, courses may be added during the first two days via MyPack Portal alone, and/or during the third and fourth days via MyPack Portal with permission of the instructor. To add a student to a course after the deadline for adding courses, an instructor must submit a Schedule Revision Form (available in departmental office) to the School/College or Graduate Dean's approval.

Dropping Courses

All 500-800 level courses may be dropped through MyPack Portal without grades during the first eight weeks of a semester and during the first two weeks of a summer session. Students and advisors should consult the specific Registration and Records calendar for drop deadlines. Students should make schedule changes as early as possible in the semester. The number of hours for which a student is officially enrolled and upon which tuition and fees are based is that number in which the student is enrolled at the end of the second week of classes of a semester and at the end of the fifth day of a summer session (the last day to withdraw or drop a course with a refund). A Schedule Revision Form (available in departmental office) is required to drop a course after the deadline. No dropping of courses shall be allowed except for documented medical reasons or other verified, unforeseen grounds of personal or family hardship. Making such exceptions to policy requires the recommendation of the chair of the student's advisory committee, the Director of Graduate Programs or Department Head, and the Dean of the Graduate School. Courses may not be dropped after the final grades have been submitted by the instructor and processed by Registration and Records.

Dropping Minicourses

The drop date for a five-week minicourse is the last day of the third week of the mini-course. The drop date for a seven-week minicourse is the last day of the fourth week of the minicourse. Instructors teaching minicourses (courses which last only a portion of the semester) should announce at the outset of these courses their appropriate drop deadlines.

Course Numbering

Graduate-level courses are numbered at the 500, 600, 700 and 800 levels. Courses at the 500 level are available to advanced undergraduate students unless otherwise specified. Courses at the 700 and 800 level are doctoral courses and are open only to students in graduate or PBS standing. Exceptions may be made for undergraduate students in honors program and seniors in the ABM Program. Consent of the department is required for enrollment in all 600- and 800-level courses. Refer to the NC State University Courses Catalog for course descriptions and prerequisites.

Note: Courses at the 500 and 700 level are letter graded. Students cannot enroll in these courses for "credit only".

Grading and Academic Standing

The Grading System

NC State University uses the following grading system:

Grade Points/Credit Hour
4.33
4.00
3.67
3.33
3.00
2.67
2.33
2.00
1.67
1.33
1.00
0.67
0.00

Grade Point Average (GPA)

The number of credit hours at the 400 level of higher that are attempted in a semester or summer session (for which regular grades are received) is divided into the total number of grade points earned to arrive at the grade point average. The cumulative and semester GPAs will include the effect of any A+ grades awarded (at 4 1/3 grade points) up to a grade point average of 4.000. The GPA will be calculated to three decimal points. Credits earned in PBS classification are also included in the GPA calculations and the determination of academic standing that become part of the Plan of Graduate Work.

Graduate Credit

To receive graduate degree credit, a grade of "C-" or higher is required in all courses taken after admission. Grades on courses taken for graduate credit as an undergraduate at NC State, in PBS classification, or transferred from other universities must have a grade of "B" or better to be transferred. All grades on courses numbered 400 and above taken in a graduate classification or for graduate credit as an undergraduate are included in the graduate GPA. Courses at the 300 level and below are not eligible for graduate credit and subsequently do not affect the graduate GPA. To graduate, a student must have a minimum 3.000 average on all graduate course work as well as all courses on his or her Plan of Graduate Work.

Graduate students who take 400-level courses that are letter graded do not have the option of taking the courses for "credit only" if they intend for the course to be part of their Plan of Graduate Work. It is appropriate for them to take selected 400-level letter-graded courses that are required by the program but will not be included in the Plan of Graduate Work for S-U grade. Examples would be 400-level courses in the student's major and FLE courses.

Grading of Graduate Courses

5XX: Letter Graded Master's Courses 6XX: S-U Graded Master's Courses

7XX: Letter Graded Doctoral Courses (ALL 7XX courses are restricted to the following classification of students

(class MR, DR, SR, SP and GR)

8XX: S-U Graded Doctoral Courses (ALL 8XX courses with the exception of those specifically listed at the end of this section are restricted to the following classification of students class MR, DR, SR, SP and GR)

9XX: Professional Courses in the College of Veterinary Medicine are not graduate courses and may not be counted in Plans of Work for graduate degrees

NOTE: Courses at the 500 and 700 level are letter graded. Students cannot enroll in these courses for "credit only".

Incompletes

The grade of "IN" (Incomplete) may be given in any course at the discretion of the instructor for work not completed because of a serious interruption in the student's work not caused by their own negligence. An "IN" must not be used, however, as a substitute for an "F" when the student's performance in the course is not passing. 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. Only work missed may be averaged into the grades already recorded for that student.

A student who receives an "IN" must complete the unfinished work to have the Incomplete converted to a final grade by the end of the next semester in which the student is enrolled, provided that this period is not longer than 12 months from the end of the semester or summer session in which the "IN" was received. Otherwise, the "IN" will be automatically converted to "F" or "U," in accord with the grading approved for the particular course. All grades of "IN" must be cleared prior to graduation. 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 incomplete course.

Except in the case of Interinstitutional Registration, grades on courses transferred from another institution will not be included in computing the GPA.

Grade Changes

When submitted to the Department of Registration and Records, end-of-course grades are final and not subject to change by reason of a revision of the instructor's judgment; nor are submitted grades to be revised on the basis of a second trial (e.g., a new examination or additional work undertaken or completed). Changes may only be made within one calendar year after the date final grades were submitted in order to correct an error of computation or transcribing or where part of the student's work has been unintentionally overlooked.

Academic Warning, Probation and Termination

Graduate students are given a notice of academic warning if they have accumulated 18 or fewer hours at the 400 level or above and have less than a 3.000 GPA. Graduate students are placed on academic probation if they have accumulated more than 18 hours at the 400 level or above and have a GPA in the range of 2.667 to 2.999 and will be ineligible for financial aid or appointment or reappointment to an assistantship or fellowship. A student's graduate study is terminated if they have accumulated more than 18 hours at the 400 level or above and have a GPA below 2.667 or if they have accumulated 30 or more hours and have less than a 3.000 GPA. "Accumulated" in all cases is defined as the total number of hours for which a grade has been issued.

In the case of program termination, no further registration in a graduate classification will be permitted. Under extenuating circumstances the student will be reinstated upon the written recommendation of the department

and approval by the Graduate Dean. Departments have the prerogative of recommending the termination of a student's graduate admission at any time if the student is not making satisfactory progress toward the degree.

Students who are eligible to attend the first summer session are eligible to attend either or both summer sessions. For example, students who receive a notice of "Graduate Admission Terminated" at the end of the first summer session may register for second summer session unless the major department recommends otherwise.

Eligibility for Assistantship, Fellowship or Traineeship

A graduate student must be in good academic standing to be eligible for appointment to an assistantship, fellowship or traineeship and must be registered in each semester in which the appointment is in effect.

Audits

Graduate students wishing to audit a course must have the approval of their advisor and of the department offering the course. While auditors receive no course credit, they 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 auditing requirements should be clearly explained in writing to the student at the beginning of the semester. Should an instructor conclude that an auditor has failed to fulfill the stipulated requirements, the instructor is justified in marking NR (no recognition given for an audit) on the final grade report.

Audits (AU) in subjects in which the graduate student has had no previous experience will be evaluated at full credit value in determining course loads. Audits taken as repetition of work previously accomplished are considered at one-half their credit value in calculating course loads. With the single exception of foreign language audits, all audit registration must fall within the maximum permissible course loads. While audit registrations are evaluated for purposes of determining permissible course loads in terms of the regulations of the Graduate School, the University Cashier's Office considers all audits, except one permitted free of charge, in terms of full credit value in calculating tuition.

Graduation

There are three official graduations for graduate students per year, occurring at the end of the fall and spring semesters and at the end of the second summer session. Formal commencement exercises are held at the end of spring and fall semesters, but any student who graduated the preceding second summer session is eligible to participate in the December commencement. All students scheduled to graduate in the fall or spring semesters are strongly encouraged to attend the respective commencement. Any doctoral candidate wishing to have the degree conferred in absentia must notify the Graduate School in writing; Master's candidates should contact their departments or programs.

Diplomas

Doctoral students graduating in the spring and fall are awarded their diplomas during the commencement exercises. Master's students, both master's and doctoral students graduating at the end of second summer session, or those students receiving permission to receive the degree in absentia can pick up their diploma during the designated pick-up dates and times in Registration and Records. Any diplomas not picked up are mailed by the Department of Registration and Records, which is also responsible for the ordering of diplomas.

Students earning a Master of Arts, Master of Science, Doctor of Education or Doctor of Philosophy degree will receive diplomas designating the degree but not the major or program of study. Students earning a master's degree in a designated field will receive diplomas indicating the field of specialization, i.e., Master of Forestry.

Students with co-majors will have those identified on their transcripts, but not on their diplomas.

Apply to Graduate

Each student must make sure to Apply to Graduate in MyPack Portal for the term in which they plan to graduate in. It is advised that students apply to graduate when the defense is scheduled, but it can be done at any time in the semester up until 5:00 p.m. on the Apply to Graduate Deadline, which is the same as the Registration Required Thesis Review Deadline. The date is on the Graduate School Calendar. A student must apply to graduate in order to graduate, have transcript posted, and receive a diploma.

Interinstitutional Registration Program

NC State participates in an Interinstitutional Registration program with the University of North Carolina at Chapel Hill, the University of North Carolina at Greensboro, the University of North Carolina at Charlotte, North Carolina Central University, and Duke University. The program provides the opportunity for students to enroll at another institution for a course or courses not offered on their home campus. Other activities include a cooperative library arrangement, joint student activities, and faculty cooperation and interchange.

Even though taking a course on another campus, the student is exclusively under the administrative direction of the NC State Graduate School. Enrollment for courses on other campuses will take place on this campus, using an Interinstitutional Approval form from Registration and Records. Such courses are considered by the Graduate School to be a part of the student's normal load and the student will be billed for the courses through the NC State University Cashier's Office. During the summer, the procedure is somewhat different in that a student must be enrolled in a least one course on the NC State campus during the same session as the requested interinstitutional registration.

When the grading system of the other institutions varies from that of NC State, grades received under Interinstitutional Registration will be converted to the NC State system. "H," "P," "L, and "F" grades earned at the University of North Carolina at Chapel Hill and "E," "G," "S" and "F" grades earned at Duke University will be converted to "A," "B," "C" and "F" grades, respectively.

Cooperating Raleigh Colleges

The Cooperating Raleigh Colleges (CRC) is a voluntary organization composed of NC State, Meredith College, William Peace University, St. Augustine's University, and Shaw University. Graduate programs are currently offered only at NC State and Meredith College, but graduate students can enroll at either institution for a course or courses not offered by their home campus.

Any NC State graduate degree student who is enrolled in at least three graduate credit hours on the NC State campus may take a course at Meredith College during fall or spring semester, provided that

- 1. the course is not taught on the NC State campus, and
- 2. the advisory committee considers the course educationally desirable.

NC State students may not register for more than a total of two courses in any semester at Meredith, and not more than six of the required academic credits for a master's degree at NC State may be accepted from that institution. Grades from Meredith are not used in computing a student's NC State grade point average.

Under this agreement, regular tuition and fees are paid to NC State. Special fees may be required for specific courses at Meredith, and the student is responsible for paying these fees.

Academic Common Market

Important Notice: As a result of the General Assembly's Appropriations Act of 2011, North Carolina's participation in the ACM, as both a sender and a receiver of students, will be phased out beginning with academic year 2012-2013. Students certified for the ACM who are enrolled and begin study prior to the second summer session in 2012 may continue to pay in-state tuition as long as they remain enrolled in their specified degree program. (Revised March 8, 2012)

The Academic Common Market (ACM) is a cooperative agreement among universities in 16 states in the southeastern United States. The ACM allows a student to enroll in a graduate program at a university in another state without having to pay out-of-state tuition if that program of study is neither

- 1. offered by the public institutions in the student's home state, nor
- 2. commonly available in the other southeastern states.

Tuition and Fees

The <u>University Cashier's Office</u> provides billing, financial aid disbursement and account management services to all students. All students paying tuition and fees are entitled to University services, facilities and programs, including the services, facilities, and programs offered by the Student Center, Health Services, Physical Education Department, and Athletics Department.

Residence for Tuition Purposes

Financial Aid

Graduate students may receive financial support through fellowships, traineeships and teaching or research assistantships sponsored by federal, state and private agencies. A graduate student must be in good academic standing (3.000 GPA or better) to be eligible for appointment to an assistantship, fellowship, or traineeship and must be registered in each semester in which the appointment is in effect. There are also minimum registration requirements for eligibility for tuition and health insurance benefits.

Assistantships Fellowships Graduate Student Support Plan

The Office of Scholarships and Financial Aid (OSFA) assists students and parents in applying for and securing financial assistance when family resources are insufficient to meet educational expenses. The OSFA offers assistance with any part of the financial aid process (including scholarships, grants, loans and campus employment), as well as providing financial aid counseling assistance.

Graduate Degrees | Minors | Graduate Certificates | Courses or Other Support to Graduate Programs

Fields Offering Graduate Degrees

The Graduate School offers major programs of study in the following fields. Except where noted by an exception in parentheses, these programs required the Graduate Records Examination (GRE) scores and will not take action on applications unless accompanied by scores for at least the GRE General (Aptitude) Test (verbal, quantitative and analytical):

Accounting - MR (GMAT)

Adult and Community College Education - EdD, MS, MEd (GRE, MAT)

Aerospace Engineering - PhD, MS (GRE)

Agricultural and Extension Education - EdD, MS, MR (GRE)

Agricultural and Resource Economics - MS (None)

Analytics - MS (None)

Animal Science - MS, MR (GRE)

Animal Science & Poultry Science - PhD (GRE)

Anthropology - MA (GRE)

Applied Mathematics - PhD, MS (GRE)

Architecture - MR (GRE)

Art and Design - MR (GRE)

Biochemistry - PhD, MS, MR (GRE)

Bioinformatics - PhD, MR (GRE)

Biological and Agricultural Engineering - PhD, MS, MR (GRE)

Biology - PhD, MS, MR

Biomanufacturing - MS, MR (GRE)

Biomathematics - PhD, MS, MR (GRE)

Biomedical Engineering - PhD (GRE)

Business Administration - MR (GRE, GMAT)

Chemical Engineering - PhD, MS, MR (GRE)

Chemistry - PhD (GRE)

Civil Engineering - PhD, MS, MR (GRE)

Climate Change and Society - MR (GRE)

Clinical Mental Health Counseling - MS, MEd (GRE, MAT)

College Counseling and Student Development - MS, MEd (GRE, MAT)

Communication - MS (GRE)

Communication Rhetoric and Digital Media - PhD (GRE)

Comparative Biomedical Sciences - PhD, MS (GRE (GRE scores required for all students except those with a DVM degree from the United States))

Computer Engineering - PhD, MS (GRE)

Computer Networking - MS (GRE)

Computer Science - PhD, MS, MR (GRE)

Creative Writing - MFA (GRE)

Crop Science - PhD, MS, MR (GRE)

Curriculum and Instruction - MS, Med (GRE, MAT)

Design - PhD, DDES (GRE)

Economics - PhD, MR, MS (GRE (GRE is only required for doctoral applicants.))

Educational Administration and Supervision - EdD (GRE, MAT)

Educational Leadership, Policy and Human Development - PhD (GRE)

Electric Power Systems Engineering - MS (GRE)

Electrical Engineering - PhD, MS (GRE)

Elementary Education - MS, MEd (None)

Engineering - MR

English - MA (GRE)

Entomology - PhD, MS (GRE)

Environmental Assessment - MR

Environmental Engineering - MS, MR (GRE)

Fiber and Polymer Science - PhD (GRE)

Financial Mathematics - MR (GRE)

Fisheries, Wildlife, and Conservation Biology - PhD, MS, MR (GRE)

Food Science - PhD, MS, MR (GRE)

Foreign Languages and Literatures - MA

Forest Biomaterials - PhD, MS, MR (GRE)

Forestry and Environmental Resources - PhD, MS, MR (GRE)

Functional Genomics - PhD, MS, MR (GRE)

Genetics - PhD, MS, MR (GRE)

Geospatial Analytics - PhD

Geospatial Information Science and Technology - MR

Graphic Design - MR (GRE (International students must submit English proficiency scores:

TOEFL (minimum 100) or IELTS (minimum 7).))

Higher Education Administration - MS, Med (GRE)

History - MA (GRE)

Horticultural Science - PhD, MS, MR

Industrial Design - MR (GRE)

Industrial Engineering - PhD, MS, MR (GRE)

Integrated Manufacturing Systems Engineering - MR (GRE)

International Studies - MR (GRE)

Landscape Architecture - MR (GRE)

Learning and Teaching in STEM - PhD (GRE)

Learning Design and Technology - MS, MEd

Liberal Studies - MA (None)

Management - MR

Marine, Earth, and Atmospheric Sciences - PhD, MS (GRE)

Materials Science and Engineering - PhD, MS, MR (GRE)

Mathematics - PhD, MS (GRE)

Mathematics Education - MS, Med (GRE (The GRE is required for M.S. only. Not required for M.Ed.))

Mechanical Engineering - PhD, MS (GRE)

Microbial Biotechnology - MR (GRE)

Microbiology - PhD, MS, MR (GRE)

Nanoengineering - MR (GRE recommended if available but not required)

Natural Resources - MS, MR (GRE)

Nuclear Engineering - PhD, MS, MR (GRE)

Nutrition - PhD, MS, MR (GRE)

Operations Research - PhD, MS, MR (GRE)

Parks, Recreation, and Tourism Management - PhD, MS, MR

Physics - PhD, MS (GRE)

Physiology - MS, MR (GRE)

Plant Biology - PhD, MS, MR (GRE)

Plant Pathology - PhD, MS, MR (GRE)

Poultry Science - MS, MR (GRE)

Psychology - PhD, MS (GRE)

Public Administration - PhD, MR (GRE)

Public History - PhD, MA (GRE)

School Administration - MR (GRE, MAT)

School Counseling - MS, MEd (GRE, MAT)

Science Education - MS, Med (GRE)

Social Work - MR

Sociology - PhD, MR (GRE)

Soil Science - PhD, MS, MR (GRE)

Special Education - MS, MEd (GRE, MAT)

Statistics - PhD, MR (GRE)

Teacher Education and Learning Sciences - PhD (GRE, MAT)

Teaching - MA (None)

Technical Communication - MS (GRE)

Technology Education - MS, Med (GRE)

Textile Chemistry - MS (GRE)

Textile Engineering - MS (GRE)

Textile Technology Management - PhD (GRE, GMAT, MAT)

Textiles - MS, MR (GRE)

Toxicology - PhD, MS, MR (GRE)

Training and Development - MEd (None)

Youth, Family, and Community Sciences - MS, MR (GRE)

Departments not normally requiring GRE scores may in special instances require their submission as additional information to be used in making a judgment of the student's potential for success in a graduate program.

Fields Offering Minors

The following fields and units, while not offering graduate degrees, support graduate education by offering graduate minors:

Biotechnology
Cognitive Science
Computational Engineering and Science
Ecology
Environmental Remote Sensing and Image Analysis
Food Safety
Genetic Engineering and Society
Geographic Information Systems
Interdisciplinary
Plant Physiology
Water Resources
Women's & Gender Studies

Departments not normally requiring GRE scores may in special instances require their submission as additional information to be used in making a judgment of the student's potential for success in a graduate program.

Fields Offering Graduate Certificates

The following fields and units, while not offering graduate degrees, support graduate education by offering graduate certificates:

Administration and Leadership - Family and Youth Programs Agricultural Education Applied Statistics and Data Management City Design Climate Adaptation Consumer Textile Product Design and Development

Counselor Education

Data Science Foundations

Digital Humanities

Downstream Biomanufacturing

Energy and Technology in Architecture

Environmental Assessment

Family Life Education and Coaching

Feed Science

Finance

Geographic Information Systems

Horticultural Science

Leadership and Volunteer Management

Marketing

Materials Science and Engineering

Mathematics

Medical Devices

Military Land Sustainability

Molecular Biotechnology

Nano-Systems Engineering

Nanobiotechnology

Nonprofit Management

Nonwovens Science and Technology

Nuclear Nonproliferation Science and Policy

Operations and Supply Chain Management

Professional Communication and Managerial Skills

Program Development in Family Life Educ Grad Certificate

Public Interest Design

Public Policy

Renewable Electric Energy Systems

Special Education: Multi-Tiered Systems of Support

Sport and Entertainment Venue Management

Statistics Education

Teaching Training and Educational Technology

Technology Entrepreneurship and Commercialization

Textile Brand Management and Marketing

Textile Supply Chain Management

Upstream Biomanufacturing

Watershed Assessment and Restoration

Youth Development and Leadership

Departments not normally requiring GRE scores may in special instances require their submission as additional information to be used in making a judgment of the student's potential for success in a graduate program.

Fields Offering Courses or Other Support to Graduate Programs

The following fields and units, while not offering graduate degrees, support graduate education by offering graduate courses or in some other capacity:

Biological Sciences Education Multidisciplinary Studies Philosophy and Religious Studies

Accounting

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Accounting					Y		

GRADUATE FACULTY

K. Krawczyk, Department Head

Director of Graduate Programs:

S. G. Allen, Box 8114, 919/515-5584, steve allen@ncsu.edu, Business Management

Named Professors: M. S. Beasley, F. A. Buckless; Professors: M. Bradford, B. C. Branson, J. F. Brazel, Y. A. Chen, K. Krawczyk, D. P. Pagach, R. B. Sawyers, P. F. Williams; Emeritus Professors: R. L. Peace; Associate Professors: R. Pennington, A. P. Schmidt, E. Z. Taylor, G. J. Zuckerman; Emeritus Associate Professors: R. L. Wright; Teaching Professors: D. S. Showalter

The Master of Accounting (MAC) is a professional degree designed to prepare students for careers in public accounting, in the accounting and finance divisions of major corporations, and in education, government, and non-profit institutions. Job titles of recent graduates include Staff Accountant, Internal Auditor, Financial Analyst, Budget Analyst, Cost Accountant, Tax Specialist, Assistant Controller, SBI Agent, State Auditor, and Internal Revenue Agent. Graduates will also be prepared to complete the CPA Examination.

Admission Requirements: Admission to the MAC program is competitive. The best-qualified applicants will be accepted up to the number of spaces available for new students. The Admissions Committee evaluates candidates on three criteria:

- undergraduate academic record and grade point average;
- GMAT score*;
- "Leadership" -- relevant activities and/or work experience; and presence, leadership, integrity, and other personal characteristics.

[*The Admissions Committee requires all applicants who score below 530 on their first attempt to retake the GMAT exam prior to the application deadline.]

Individuals with a Bachelor's degree in any major may apply to the program; however, any applicant without a Bachelor's degree in Accounting must complete a series of undergraduate

Accounting prerequisites before qualifying as a MAC degree candidate. More complete information can be found on the MAC website.

Master's Degree Requirements: Students complete an 11-course sequence in one year that includes eight graduate-level Accounting courses and three non-Accounting MBA courses (31 total credit hours). The curriculum is designed to provide a broad-based professional education. Students can choose to obtain a concentration in Information Technology (IT), Enterprise Risk Management (ERM), or Tax Strategy.

Other Relevant Information: Masters students must begin the degree program in the summer or in the fall semester. The program is primarily designed for full-time students, and most classes meet during the day. A limited part-time option, where students complete the program in two years, is also available.

All application materials are due by one of three application deadlines - **December 1** for early admission and consideration in both the MAC Fellowship and Scholarship programs; **February 1** for final consideration in both the MAC Fellowship and Scholarship programs; **March 1** for all other applicants.

Click on **Graduate Courses** for current course information.

NCSU Graduate Catalog

Agricultural and Human Sciences

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Agricultural and Extension Education		Y	Y		Y		
Youth, Family, and Community Sciences			Y		Y		

GRADUATE FACULTY

C. Dunn, Department Head

Directors of Graduate Programs:

J. A. Bruce, Box 7607, jabruce2@ncsu.edu, Agricultural and Human Sciences K. I. Allen, Box 7606, kiallen@ncsu.edu, Agricultural and Human Sciences

Named Distinguished Professors: M. D. Schulman, D. J. Werner; Professors: C. Dunn, C. E. Farin, J. L. Flowers, B. M. Kirby, S. D. Kirby, R. W. Shearon, B. Silliman, E. B. Wilson; Adjunct Professors: M. M. Baker; Emeritus Professors: B. Croom, K. B. DeBord, D. M.

Jenkins, J. W. McClelland, T. T. McKinney, G. E. Moore, R. D. Mustian; Associate Professors: K. I. Allen, L. B. Bearon, A. O. Behnke, C. L. Bird, J. A. Bruce, B. J. Chapman, H. C. Edwards, K. S. Jayaratne, M. J. Kistler, T. D. Park, W. J. Warner; Adjunct Associate Professors: D. A. Boone, R. J. Harrell; Emeritus Associate Professors: D. W. Matthews, R. M. Stewart; Assistant Professors: J. D. Bloom, A. M. Hardison-Moody, L. H. Haynes-Maslow, K. E. McKee, J. Morgan; Adjunct Assistant Professors: M. Addor; Extension Assistant Professors: S. S. Jakes, M. N. Stumpf; Teaching Associate Professors: C. V. Jordan

The Youth, Family & Community Sciences Program provides graduate study for current and emerging professionals in parent education, family life education, and community-based youth development, or related careers. The demand for professionals to teach, administer, and create support systems for children, youth and families is increasing through Cooperative Extension programs, government agencies and initiatives, community-based non-profits, court systems, prisons, social service organizations, health care agencies/organizations, and schools. The following distance-based graduate programs are available:

Master of Science in Youth, Family, and Community Sciences (M.S. requires 36 total hours including a thesis)

Master of Youth, Family, and Community Sciences (M.R. requires 30 hours and a culminating supervised professional experience)

Admission Requirements: Students apply through NC State via the normal Graduate School admissions procedures; applications are reviewed twice each year on March 1 and October 1. All application materials must be submitted electronically (online); mailed or faxed materials are not accepted. Only complete applications are reviewed. In addition to all Graduate School admission requirements, the Department requires GRE scores not more than five years old, three academic references, and a 500-800 word statement of current/future career goals. The statement should also indicate whether the applicant is interested in the thesis or non-thesis option. The Graduate School requires a 3.00 average (4.00 scale) in the undergraduate program. The most qualified applicants will be accepted up to the number of spaces that are available for new students. Exceptions to the minimum grade point average and lower-than-desired GRE scores may be made for students with special backgrounds, abilities, circumstances, and interests.

Master's Degree Requirements: The Master of Science in Youth, Family, and Community Sciences (M.S.) requires 36 hours culminating in a final oral examination and thesis approved by the student's graduate committee. The Master of Youth, Family, and Community Sciences (M.R.) is a non-thesis degree that requires a total of 30 credit hours culminating in a capstone supervised professional experience. Both degree programs are built upon foundations of theory and application composed of four focus areas: (1) foundations of family life and youth development, (2) professional development and leadership, (3) research and methodological inquiry, and (4) content area concentration.

Student Financial Support: No financial aid/assistantships are available directly from the Department. Financial aid is available from the NC State Office of Financial Aid and on a competitive basis from the NC State Graduate School. Students seeking financial aid should contact the NC State Financial Aid Office directly.

Other Relevant Information: Distance course delivery methods include: totally asynchronous web- based classes, and synchronous Internet based classes. The M.R. and M.S. programs may be successfully completed totally via distance.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Analytics

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Analytics			Y				

GRADUATE FACULTY

Director of Graduate Programs:

M. Rappa, Box 7293, 919/513-0480, michael_rappa@ncsu.edu, Analytics

Named Professors: D. A. Dickey; Named Distinguished University Professors: M. Rappa; Professors: C. G. Healey, S. J. Simmons, R. S. Warr, L. A. Williams; Adjunct Professors: S. M. Hsiang; Emeritus Named Professors: C. P. Jones; Emeritus Professors: H. A. Devine, C. Meyer; Associate Professors: R. Y. Chirkova, J. B. Earp, B. A. Watson; Associate Professors of the Practice: S. Dasmohapatra; Adjunct Associate Professors: T. Xie

The Master of Science in Analytics (MSA) is an intensive 10-month degree with a strong practical orientation designed to give students a thorough understanding of the tools, methods, and applications of advanced analytics. The curriculum is designed entirely for MSA students and classes are taught as a cohort. Students work frequently in teams and receive hands-on training using real data with industry-standard software tools. Its educational objectives include but are not limited to topics, such as data quality and integration, data and text mining, time series forecasting, optimization, survival analysis, and other areas of statistics; data security and privacy; project management and communication skills. Student team projects aim to provide experience with solving complex analytical problems in industry and in other areas of science and engineering.

Admission Requirements: Admission to the MSA program is highly competitive. The best-qualified applicants will be accepted up to the limited number of seats available for students each year. The Admissions Committee evaluates candidates on criteria such as:

- overall academic record and grade point average;
- academic performance in analytical/quantitative subjects;
- relevant employment experience and potential to succeed in the profession; and

• leadership, integrity, and other personal character traits.

Individuals with a bachelor's degree in any major may apply to the program; however, an applicant without prior coursework in statistics, mathematics, computer programming, would need to complete a set of prerequisite courses before qualifying as a candidate for admission. More information can be found on the MSA website.

Master's Degree Requirements: Students complete 30 credit hours of defined coursework in a period of ten months beginning in Summer Session II and ending the following Spring semester. The integrated curriculum is designed to provide a focused education in the software tools, methods and applications of data analytics.

Other Relevant Information: Students must begin the degree program in the first semester (Summer Session II) and complete all 30 credit hours of the curriculum. The program is designed for full-time students only. Applications for admission are reviewed between December and April. International applicants must apply early.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Animal Science & Poultry Science

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Animal Science & Poultry Science	Y						

GRADUATE FACULTY

Directors of Graduate Programs:

- J. Eisemann, Box 7621, 919/515-4044, joan_eisemann@ncsu.edu, Animal Science
- J. L. Grimes, Box 7608, 919/515-5406, jesse_grimes@ncsu.edu, Poultry Science

Named Professors: W. L. Flowers; Named Distinguished Professors: J. T. Brake, P. R. Ferket, J. Odle, C. J. Schal; Professors: G. W. Almond, K. E. Anderson, C. M. Ashwell, D. K. Carver, P. A. Curtis, F. W. Edens, J. Eisemann, K. L. Esbenshade, C. E. Farin, V. Fellner, J. L. Grimes, S. W. Kim, D. K. Larick, H. Liu, M. S. Merrill, J. A. Moore, P. E. Mozdziak, E. O. Oviedo-Rondon, J. N. Petitte, R. M. Petters, J. A. Piedrahita, M. H. Poore, M. T. See, P. D. Siciliano, E. VanHeugten, D. P. Wages; Adjunct Professors: R. D. Boyd, J. B. Golden, W. O. Herring, E. A. Koutsos, S. M. Shane, Z. Uni; Emeritus Named Professors: E. Eisen; Emeritus Professors: B. P. Alston-Mills, G. A. Benson, L. S. Bull, T. A. Carter, V. L. Christensen, R. G. Crickenberger, J. D. Garlich, W. M. Hagler, R. W. Harvey, G. B. Havenstein, W. L. Johnson, J. R. Jones, C. A.

Lassiter, J. Luginbuhl, R. L. McCraw, W. M. Morrow, R. M. Myers, C. R. Parkhurst, O. W. Robison, F. D. Sargent, B. W. Sheldon, J. C. Shih, T. D. Siopes, S. P. Washburn, L. W. Whitlow, J. C. Wilk, C. M. Williams; *Associate Professors:* R. B. Beckstead, D. J. Hanson, M. T. Knauer, M. D. Koci, C. Maltecca, S. E. Phillips, D. H. Poole, K. E. Saker, G. Valacchi; *Adjunct Associate Professors:* R. J. Harrell, C. R. Stark; *Emeritus Associate Professors:* E. U. Dillard, M. D. Whitacre; *Assistant Professors:* D. A. Esposito, A. C. Fahrenholz, K. A. Livingston, C. C. Nestor, S. H. Ward; *Research Assistant Professors:* F. Tiezzi Mazzoni Della Stella Ma; *Adjunct Assistant Professors:* K. A. Gray, C. L. Heggen-Peay, T. F. Middleton, D. W. Newcom, C. J. Williams; *Extension Assistant Professors:* D. D. Harmon; *Teaching Associate Professors:* S. Trivedi; *Teaching Assistant Professors:* K. D. Ange-Van Heugten

Doctoral Degree Requirements: A doctoral degree in Animal Science and Poultry Science with a concentration in either Animal Science or Poultry Science is offered. Specific course requirements are flexible and each student's program is developed in consultation with their Ph.D. advisory committee. The minor is optional but external faculty representation is required on the advisory committee.

Note: The Master's programs in <u>Animal Science</u> or Poultry Science are administered independently by each department.

Admission Requirements: Factors considered for admission include: grade point average, scores on the GRE, undergraduate courses, and letters of recommendation. A member of either the Department of Animal Science or Department of Poultry Science faculty serves as the applicant's advisor.

Student Financial Support: The Departments of Animal Science and Poultry Science offer a limited number of research and teaching assistantships that are awarded on a competitive basis. Students may also be supported by research grant funds awarded to faculty members. The total support package includes health insurance, tuition, and a stipend. Students applying for these assistantships are advised to apply by January 31 for fall admission.

Other Relevant Information: There are two curriculum codes for the Animal Science and Poultry Science doctoral degree program. If a student is interested in a program concentration in Animal Science, the appropriate curriculum code for the admissions application is ANA. If the student is interested in a program concentration in Poultry Science, the appropriate curriculum code for the admissions application is ANP. If the appropriate curriculum code is not selected, it will delay the department's receipt of the applicant's information from the Graduate School.

Click on <u>Graduate Courses - Animal Science</u> for current course information.

Click on <u>Graduate Courses - Poultry Science</u> for current course information.

NCSU Graduate Catalog

Animal Science

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Animal Science			Y		Y		

GRADUATE FACULTY

M. T. See, *Department Head*

Director of Graduate Programs:

J. Eisemann, Box 7621, 919/515-4044, joan eisemann@ncsu.edu, Animal Science

Named Professors: W. L. Flowers; Named Distinguished Professors: J. Odle; Professors: G. W. Almond, J. Eisemann, K. L. Esbenshade, C. E. Farin, V. Fellner, F. Isik, S. W. Kim, D. K. Larick, H. Liu, M. S. Merrill, J. A. Moore, R. M. Petters, J. A. Piedrahita, M. H. Poore, M. T. See, P. D. Siciliano, E. VanHeugten, E. B. Wilson; USDA Professors: J. B. Holland; Adjunct Professors: R. D. Boyd, M. Choct, J. A. Hansen, E. A. Koutsos, W. B. Roush, T. A. van Kempen; *Emeritus Named Professors:* E. Eisen; *Emeritus Professors:* B. P. Alston-Mills, G. A. Benson, L. S. Bull, E. V. Caruolo, R. G. Crickenberger, W. J. Croom, W. M. Hagler, R. W. Harvey, W. L. Johnson, J. R. Jones, C. A. Lassiter, J. Luginbuhl, R. L. McCraw, W. M. Morrow, R. M. Myers, C. R. Parkhurst, O. W. Robison, F. D. Sargent, S. P. Washburn, L. W. Whitlow, J. C. Wilk, C. M. Williams; Associate Professors: D. J. Hanson, M. T. Knauer, C. Maltecca, S. E. Phillips, D. H. Poole, K. E. Saker, G. Valacchi; Research Associate Professors: L. Xi; Adjunct Associate Professors: R. J. Harrell; Emeritus Associate Professors: E. U. Dillard, M. D. Whitacre; Assistant Professors: D. A. Esposito, C. C. Nestor, C. L. Pickworth, S. H. Ward; Research Assistant Professors: F. Tiezzi Mazzoni Della Stella Ma; Adjunct Assistant *Professors:* D. S. Casey, J. V. Felts, A. G. Gernat, K. A. Gray, C. L. Heggen-Peay, J. W. Holl, R. O. Maguire, T. F. Middleton, D. W. Newcom; Extension Assistant Professors: D. D. Harmon; Teaching Associate Professors: S. Trivedi; Teaching Assistant Professors: K. D. Ange-Van Heugten

Animal science offers an opportunity for training in a diversity of basic sciences and the integration of such knowledge into the framework of a living system. Students may major or comajor in animal science or one of the following disciplines: biochemistry, genomics, genetics, microbiology, nutrition, physiology or statistics. Students may also concentrate in management and production areas.

Admission Requirements: Factors considered for admission include: grade point average, scores on the GRE, undergraduate courses, and letters of recommendation. In addition, a member of the Animal Science Graduate Faculty must be willing to serve as the applicant's advisor.

Master of Science: A minimum of 30 credit hours, including 18 hours of graduate level course work in the degree program, is required. The minor is optional and external faculty representation is not required on the advisory committee.

Master of Animal Science: The non-thesis Master of Animal Science (MAS) degree (Option B) requires a minimum of 36 credit hours, 19 credits of core courses and 17 credits of elective courses. Additional information regarding core courses and elective course requirements can be found on the <u>Animal Science Graduate Program</u> web site. The MAS degree program is also offered through distance education.

Doctoral Degree Requirements: The department offers a Ph.D. program in <u>Animal Science and Poultry Science</u> with a concentration in Animal Science. A minimum of 72 graduate credit hours are required. For a student who already holds a Master's degree, upon initial admission a maximum of 18 credit hours from the Master's degree may be applied to this minimum.

Student Financial Support: A limited number of research and teaching assistantships are available through the department and are awarded on a competitive basis. Students may also be supported by research grant funds awarded to faculty members. The total support package includes health insurance, tuition, and a stipend. Students applying for assistantships are advised to apply by January 31 for fall admission.

Other Relevant Information: To provide an opportunity for students to develop their teaching skills, all graduate students are required to assist in the departmental teaching program regardless of source of financial support.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Anthropology

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Anthropology				Y			

GRADUATE FACULTY

Director of Graduate Programs:

N. M. Haenn, Box 8101, nmhaenn@ncsu.edu, Sociology and Anthropology

Professors: A. H. Ross; Associate Professors: D. T. Case, K. L. Ebert, N. M. Haenn, A. Manzoni, J. M. Wallace; Adjunct Associate Professors: W. E. Wormsley; Assistant Professors: M. A. DeSoucey, C. A. Juarez, S. C. McManus, J. K. Millhauser; Adjunct Assistant Professors: B. L. Clark; Teaching Assistant Professors: C. A. Lewald

The graduate degree in Anthropology is a 30-hour, two-year long Master of Arts program which will enable students to gain a deeper understanding of the behavior, beliefs, and evolutionary legacy of the human species. Students normally select a specialty area in which to focus their studies, such as archaeology, biological anthropology, or cultural anthropology.

The program provides excellent preparation for students wishing to pursue a Ph.D. in Anthropology. Graduates of the program may also pursue employment in a variety of areas including research and educational institutions, development organizations and non-profits, human resource management, cultural resource management, museums, or in physical anthropology or archeology labs.

Admissions Requirements: In addition to general Graduate School requirements, applicants are required to provide a completed application, including transcripts, GRE scores, three letters of recommendation, a personal statement, and a writing sample. CV or resume is optional but encouraged. The deadline for completed applications is January 10. The curriculum is set for fall admission only.

Master's Degree Requirements: The M.A. degree requires a total of 30 credit hours. All students take three hours of theory and select a specialty area, such as archaeology, bioarchaeology, or cultural anthropology. Students who write a master's thesis will take six hours of thesis research credit (ANT 695). Students completing a non-thesis (Option B) program take additional coursework in place of the six hours of ANT 695 credit.

Student Financial Support: A limited number of teaching and research assistantships are available on a competitive basis.

Click on **Graduate Courses** for current course information.

NCSU Graduate Catalog

Architecture

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Architecture					Y		

GRADUATE FACULTY

D. B. Hill, Department Head

Director of Graduate Programs:

D. B. Hill, Box 7701, 919/515-8357, dbhill@ncsu.edu, Architecture D. K. Gulling, Box 7701, 919/515-8362, dkgullin@ncsu.edu, Architecture

Professors: R. F. Abrams, T. M. Barrie, D. B. Hill, W. Place, J. P. Rand; Professors of the Practice: M. E. Purnell; Emeritus Professors: P. Batchelor, G. Bizios, M. J. Malecha, F. A. Rifki, H. Sanoff; Associate Professors: B. Bell, S. Cho, J. Coll-Barreu, D. K. Gulling, J. Hu, B. W. Laffitte, P. E. Morgado, S. G. Queen, K. J. Schaffer, J. O. Tector; Adjunct Associate Professors: M. Kentgens-Craig; Assistant Professors: T. L. Allen, B. Erdim; Research Assistant Professors: T. R. Rider; Assistant Professors of the Practice: G. D. Hallowell

The School of Architecture offers three tracks to the Master of Architecture degree: Track 1 is for applicants with a four-year undergraduate pre-professional degree in architecture and may be completed in two years of full-time study. Track 2 is for applicants holding a five-year NAAB-accredited Bachelor of Architecture degree and normally requires three semesters in residence. Track 3 is for students with undergraduate degrees in fields other than architecture. This track normally requires three semesters of preparatory work before entering the final two-year program of graduate study. Some applicants with design-related academic or professional experience may be able to complete the preparatory work in less time.

A variety of courses are available within the School of Architecture in urban and community design, architectural history and theory, material fabrication, professional practice, building technology and environmental systems.

Admission Requirements: In addition to documents required by the Graduate School, students apply to the Master of Architecture program by submitting the following documents by January 5: (1) Portfolio of work; (2) Completed School Personal Data Form; (3) GRE scores (Track 3 applicants only); (4) TOEFL scores (foreign language students only). Applicants will be considered on an individual basis. Exceptions to Graduate School policy may be made for students indicating other qualifications and professional experience.

Master's Degree Requirements: The school stipulates the minimum course credits based on educational and professional goals to individualize a plan of study.

Student Financial Support: The school awards scholarships, awards, and teaching assistantships competitively. It also supports national and statewide scholarships, fellowships, and awards. All support is merit based, not need based. No special application for such support is necessary at the time of admissions.

National Architectural Accrediting Board (NAAB): 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 6-year, 3-year, or 2-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 preprofessional undergraduate degree and aprofessional 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 NC State University School of Architecture offers the following NAAB accredited degree programs:

B.Arch (pre-professional degree + 30 graduate credits)
M.Arch Track 1 (pre-professional degree + 48 graduate credits)
M.Arch Track 3 (non-pre-professional degree + 96 credits)

Next Accreditation Visit for All Programs: 2018

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Art and Design

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Art and Design					Y		

GRADUATE FACULTY

C. D. Cox, Department Head

Directors of Graduate Programs:

E. Polyak, Box 7701, epolyak@ncsu.edu, Art and Design

T. L. Allen, Box 7701, 617/388-1078, tlallen2@ncsu.edu, Art and Design

Professors: S. D. Brandeis, C. D. Cox, H. P. Marchant Montenegro, J. M. Scearce; Emeritus Professors: C. E. Joyner; Associate Professors: L. M. Diaz, P. J. Fitzgerald, R. A. Flinchum, S. G. Queen, K. C. Rieder, M. E. Russo; Associate Professors of the Practice: P. D. Lovell; Emeritus Associate Professors: V. K. Plume, D. G. Raymond, S. M. Toplikar; Assistant Professors: T. L. Allen, T. M. Berreth, K. A. Diuguid, J. D. LeBlanc, C. Mouat Croxatto, E. Polyak; Teaching Assistant Professors: T. L. Temple

The Art and Design program offers an educational structure that creates a new art and design professional: one for whom artistic and practical talents are developed as different expressions of individual potential. Our objectives are to graduate highly educated art and design professionals with integrated competencies in art, design, aesthetics, theory, hand and digital technologies, design process, and the combination of skills in the chosen concentration with other disciplines of human knowledge.

Areas of concentration in the Master of Art and Design are (1) Fibers and Surface Design, and (2) Animation and New Media.

Admission Requirements: Students will be required to submit a portfolio of past work in electronic format; three letters of recommendation; a statement of personal goals; and transcripts of undergraduate work (minimum undergraduate GPA of 3.0). An interview will be required, but in cases of international applicants or those quite distant from NC State University, may be conducted by means of a long distance phone conversation or may be waived at the faculty's discretion.

Masters Degree Requirements: The program of study requires a minimum of 48 credit hours of graduate work depending on background preparation of the applicant. Separate tracks of 60 and 72 credit hours accommodate students changing design disciplines or with insufficient background in the chosen concentration.

Other Information: We will only admit students to the program in the fall semester each year. Deadline for application is January 5.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Biochemistry

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Biochemistry	Y		Y		Y		

GRADUATE FACULTY

M. A. Simpson, Department Head

Director of Graduate Programs:

M. B. Goshe, Box 7622, michael goshe@ncsu.edu, Biochemistry

Named Distinguished Professors: L. K. Hanley-Bowdoin; Professors: J. J. Barycki, D. T. Brown, J. W. Brown, H. M. Hassan, C. L. Hemenway, J. M. Horowitz, J. A. Knopp, J. M. Mackenzie, E. S. Maxwell, E. S. Miller, M. A. Simpson, K. R. Weninger, P. L. Wollenzien; Research Professors: J. Cavanagh; Adjunct Professors: R. E. Cannon, J. Cavanagh, J. D. Otvos; Emeritus Professors: J. S. Kahn, W. L. Miller, J. W. Moyer, E. C. Theil; Emeritus Named Distinguished Professors: H. R. Horton; Emeritus Distinguished Professors: R. R. Sederoff, H. E. Swaisgood; Associate Professors: M. B. Goshe, C. C. Hardin, F. Meilleur, R. B. Rose; Research Associate Professors: H. Gracz, R. Hernandez; Adjunct Associate Professors: D. F. Ferreira; Assistant Professors: C. J. Doherty, G. Xu; Research Assistant Professors: P. D. Swartz; Adjunct Assistant Professors: R. E. Cannon; Teaching Assistant Professors: J. T. Ascencio-Ibanez, D. G. Presutti

The graduate program in biochemistry is designed to prepare individuals for careers in research and teaching. Emphasis is primarily focused on laboratory research, where graduate students work closely with faculty. The department is well equipped to conduct research in biochemistry, biophysics, molecular biology and molecular genetics.

Admission Requirements: Students entering the graduate program in biochemistry should have a bachelor's degree in biochemistry, chemistry or a related physical or biological science, including undergraduate courses in organic chemistry, calculus, physics and physical chemistry, as well as biochemistry/molecular biology.

Master of Science Degree Requirements: The Master of Science degree requires a minimum of 30 credit hours of courses and thesis research including nine credit hours in biochemistry graduate core courses. On average, completion of the M.S. degree requires two to three years.

Doctoral Degree Requirements: Requirements for the Ph.D. degree include a minimum of 30 credit hours in course work and thesis research, including the three graduate core courses and at least two advanced courses in biochemistry/ molecular biology; teaching experience. Formal course work may be completed within three semesters; on average, completion of the Ph.D. degree requires five years.

Student Financial Support: The department endeavors to meet the financial needs of students accepted into its doctoral program. Essentially all admitted students are offered the opportunity to apply for graduate teaching and research assistantships.

Other Relevant Information: The Department of Biochemistry is jointly administered by the Colleges of Agriculture and Life Sciences and Physical and Mathematical Sciences. The department, committed to a strong research environment, interacts with other life science departments on campus as well with the other research universities and institutes of the Research Triangle area.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Biological and Agricultural Engineering

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Biological and Agricultural Engineering	Y		Y		Y		

GRADUATE FACULTY

G. A. Fox, Department Head

Director of Graduate Programs:

J. J. Classen, Box 7625, 919/515-6755, john_classen@ncsu.edu, Biological and Agricultural Engineering

Named Professors: M. D. Boyette, W. F. Hunt; Professors: J. J. Cheng, M. S. Chinn, G. A. Fox, G. L. Grabow, S. A. Hale, L. W. Li, K. P. Sandeep, S. B. Shah, W. Yuan; Adjunct Professors: C. R. Daubert, B. E. Farkas; Emeritus Professors: R. O. Evans, G. D. Jennings, L. F. Stikeleather, D. H. Willits; Emeritus Named Distinguished Professors: R. W. Skaggs; Associate Professors: F. P. Birgand, M. R. Burchell, J. J. Classen, S. G. Hall, R. L. Huffman, P. Kolar, G. T. Roberson, M. A. Youssef; Emeritus Research Associate Professors: G. M. Chescheir; Adjunct Associate Professors: D. M. Amatya, P. N. Dugba, R. R. Sharma-Shivappa; Assistant Professors: C. F. Castro Bolinaga, N. Nelson, C. Sayde, J. K. Ward; Research Assistant Professors: C. Simmons; Adjunct Assistant Professors: E. Z. Bean, K. B. Cantrell, J. M. Hathaway, P. R. Puckett; Extension Associate Professors: B. A. Doll; Extension Assistant Professors: G. H. Ellington; Emeritus Extension Professors: J. Spooner

Course offerings or research facilities are available in the following areas: bioinstrumentation, biomechanics, bioprocessing, food and process engineering, biological systems modeling,

aquaculture, hydrology, water table management, ground water management, animal waste management, non-point source pollution, power and machinery, soil and water, controlled environment agriculture, electrical and electronic systems, robotics and machine vision.

Admission Requirements: A baccalaureate in biological or agricultural engineering or the equivalent is the preferred prerequisite for admission. Those with strong academic background in the physical or biological sciences may also be admissible with a requirement for certain additional background undergraduate work. In the case of applicants with Master's degrees, a Master's GPA of at least 3.2 is required for admission. Exceptions to the overall undergraduate GPA requirements may be made for cases where performance in the major or during the last two years was at or above the 3.00 level.

GRE scores are recommended for those with academic performance records near the minimal level. Applicants without engineering degrees from domestic accredited institutions must submit GRE scores to be considered for admission. Admission decisions are made by a faculty review committee. The best-qualified applicants will be accepted up to the number of spaces available for new students.

Master's Degree Requirements

M.BAE: This Option B non-thesis degree requires 30 hours of approved graduate course work. This degree is available via Distance Education.

M.S.: This is a thesis degree requiring 30 hours of approved graduate coursework.

Doctoral Degree Requirements: Course hour requirements are flexible but typically include at least 36 hours beyond a Master's degree. Direct admission without a Master's is possible in exceptional cases. A minor is required.

Student Financial Support: Graduate assistantships are available to students in this program on a competitive basis.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Biological Sciences

There is no separate graduate major in the biological sciences, but both M.S. and Ph.D. degrees are offered in several life science departments and programs of the College of Agriculture and Life Sciences. Interdisciplinary courses applicable to several graduate programs are offered by the <u>Department of Biology</u>.

Biology

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Biology	Y		Y		Y		

GRADUATE FACULTY

Director of Graduate Programs:

R. E. Irwin, Box 7617, reirwin@ncsu.edu, Zoology

Named Professors: W. G. Cope, R. R. Dunn, H. B. Patisaul; Named Distinguished Professors: R. R. Anholt; Named Distinguished University Professors: T. F. MacKay; Professors: D. D. Aday, B. L. Black, R. J. Borski, D. Buchwalter, J. A. Buckel, H. V. Daniels, D. B. Eggleston, J. R. Godwin, K. Gross, J. M. Hinshaw, R. E. Irwin, C. A. Layman, T. M. Losordo, J. A. Rice, A. H. Ross, M. H. Schweitzer, D. Shea; Research Professors: S. M. Belcher; USDI Professors: J. A. Collazo, T. J. Kwak, T. R. Simons; Adjunct Professors: A. E. Bogan, J. G. Boreman, J. J. Govoni, N. M. Haddad, J. E. Hightower, G. McMahon, J. Rogers, F. S. Scharf; *Emeritus* Professors: P. T. Bromley, B. J. Copeland, F. T. Corbin, P. D. Doerr, W. C. Grant, R. M. Grossfeld, T. L. Grove, H. F. Heatwole, R. A. Lancia, R. L. Noble, K. H. Pollock, J. F. Roberts, H. A. Underwood, J. G. Vandenbergh, T. G. Wolcott; Associate Professors: A. Hartstone-Rose, R. B. Langerhans, C. J. Mattingly, N. M. Nascone-Yoder, M. Niedzlek-Feaver; Adjunct Associate Professors: A. B. Heckert, R. M. Shelley, B. L. Stuart; Assistant Professors: K. Marsden, L. A. McGraw, J. E. Meitzen, J. K. Pacifici, A. J. Planchart, B. J. Reading, R. B. Roberts, B. W. Taylor; Research Assistant Professors: J. R. Fischer, M. B. Reiskind, A. A. Smith, L. E. Zanno; Adjunct Assistant Professors: T. R. Black, A. E. Bogan, D. T. Cobb, L. B. Daniel, M. J. Eaton, R. J. Heise, C. J. Kendall, R. W. Laney, A. J. McKerrow, J. A. Morris, K. W. Shertzer, A. J. Terando; Teaching Associate Professors: M. D. Engell, M. G. Ferzli, J. L. Lubischer, L. D. Parks; Lecturers: L. B. Daniel

Areas of study include: cell biology, physiology, ecology, evolution, behavior, and fisheries, wildlife and conservation biology. Specializations within these areas include developmental biology, neurobiology, genomics, invertebrate biology, animal reproduction, biorhythms, behavioral ecology, community ecology, population ecology, conservation biology, fisheries ecology, wildlife field studies, aquaculture and others.

Application Deadlines: To guarantee consideration for funding, applications should be complete by the following dates: for Fall Semester admission both U.S. and international applicants should have their application materials completed by January 15; for Spring Semester the deadline is October 15 for U.S. applicants and international applicants. Please note that it typically requires four to six weeks from the date of your request until transcripts, letters of recommendation, and GRE scores reach us. Applications received after the dates listed above will still be considered until the Graduate School deadlines (June 25 and November 25 for U.S. applicants, March 1 and July 15 for international applicants); however, opportunities for funding

may be limited (note that the Biology Graduate Program does not accept M.S. and Ph.D. students without support).

Admission Requirements: It is important that you identify a potential faculty adviser, as this will greatly increase your chance of admission to NCSU's Biology Graduate Program. Although all applications are made available to faculty advisers for review, a graduate student will not be admitted to the Biology Program for graduate studies unless the prospective student has identified a faculty adviser. Once a faculty adviser has requested review of a prospective student, the application is then evaluated with regard to the applicant's potential for success in graduate school. The admissions process involves consideration of the ability of our program to accommodate students.

Successful applicants usually have a Bachelor's degree in a biological science with at least an overall B average and a minimum number of courses in biology and supporting fields (6 in biology, 4 in chemistry, 2 in physics, and 2 in mathematics). In addition to the applicant's grades and coursework, we consider relevant experience (e.g., through internships, research experiences, and volunteer or paid work), statement of interest, letters of recommendation, and GRE scores. We expect applicants for the MS degree to have at least a 3.0 GPA and a combined score of at least 295 (new GRE scale) or 1000 (old scale) on the quantitative and verbal GREs. For PhD applicants we look for a GPA of at least 3.2 and combined GRE of at least 308 (new GRE scale) or 1200 (old scale). Research experience is highly recommended.

Master's Degree Requirements: M.S.: AEC502 and PHI816 (or equivalent) are required. No more than six hours of temporary courses (AEC/BIO/INB 624, 824) or two hours of departmental seminar can be included in the 30-hour requirement for the M.S. Six hours of research credits (INB 695) resulting in a thesis are required. A minor (usually 9-10 hours) is optional. *Master of Zoology:* AEC502 and PHI816 (or equivalent) are required. Of the 36 credit hours required, 20 must be regular courses at the 500-800 level, and four to six must be special problems (INB 631). Other requirements may be imposed by the advisor.

Doctoral Degree Requirements: AEC502 and PHI816 (or equivalent) are required. A student's advisory committee recommends appropriate courses which will provide a strong foundation in the student's area of interest. A minimum of 10 hours of research (INB 895) leading to a dissertation is required. A minor (usually 9-10 hours) is optional.

Student Financial Support: Graduate teaching and research assistantships are available to well-qualified M.S. and Ph.D. students.

Other Relevant Information: Students may also pursue degrees in interdepartmental programs in Biomathematics, Physiology, and Fisheries and Wildlife Sciences. Excellent research facilities, equipment and computers are available. Off-campus research is conducted at the Pamlico Aquaculture Field Laboratory, research and extension centers in Eastern and Western North Carolina, the Center for Marine Science and Technology in Morehead City, and at facilities of state and federal agencies and private organizations. Field work can be conducted at nearby natural areas and laboratory work at various state and federal laboratories associated with the department. For additional information see the Biology Department web page:

www.harvest.cals.ncsu.edu/biology.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Biomanufacturing

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Biomanufacturing			Y		Y		

GRADUATE FACULTY

Director of Graduate Programs:

J. H. van Zanten, Box 7928, 919/515-0217, <u>jhvanzan@ncsu.edu</u>, Chemical and Biomolecular Engineering

Named Professors: A. M. Grunden; Named Distinguished Professors: R. G. Carbonell; Professors: M. C. Flickinger, H. H. Lamb, P. E. Mozdziak, H. A. Sederoff, J. D. Sheppard; Research Professors: I. Y. Perera; Associate Professors: P. T. Hamilton, G. J. Williams; Research Associate Professors: K. Efimenko; Assistant Professors: S. Menegatti; Teaching Associate Professors: G. L. Gilleskie; Teaching Assistant Professors: J. H. van Zanten

The Golden LEAF Biomanufacturing Training and Education Center (BTEC) has established two new graduate degrees -- a Master of Biomanufacturing (MR) and a Master of Science (MS) in Biomanufacturing. These degrees may be taken full-time or part-time. The MS in Biomanufacturing requires completion of advanced hands-on courses in the BTEC simulated cGMP facility, global regulatory affairs training and is a research-based degree which requires a written thesis in addition to selected bioscience-focused MBA coursework. The Master of Biomanufacturing (non-thesis) combines advanced biomanufacturing cGMP BTEC courses, global regulatory affairs training with additional bioscience-focused MBA courses taught by faculty from the Jenkins Graduate School of Management, and is designed to prepare program graduates to work as managers and for leadership positions in the biomanufacturing industries. Both the MR and MS degrees include professional skills training in effective oral, electronic and written communication for both technical and business careers. Most coursework and required laboratory courses are offered in the evenings at BTEC to accommodate working professionals.

Admission Requirements: Admission to the BIOM program requires completion of an undergraduate degree in engineering, life science or physical sciences, letters of recommendation, and a statement of career goals. A minimum overall grade point average of 3.0 and GRE scores in the 80th percentile are also required. Applicants with previous industry experience or working professionals are strongly encouraged to apply.

Master's Degree Requirements

Master of Biomanufacturing. BIOM students will complete a minimum of 36 total credit hours including 3 credit hours of biomanufacturing industry internship, 6 credits of industry practicum case studies, 2 credit hours of process-focused research experience under the direction of a graduate advisor, 3 credits of global regulatory affairs and 9 credits of MBA courses in project management, biosciences management and business foundations. Students will submit final written reports that summarize their internship as well as their research experience and will make a presentation to the BIOM graduate faculty.

Master of Science. The Master of Science degree also requires a minimum of 36 credit hours. Similar to the MR, the BIOM Master of Science curriculum will combine interdisciplinary coursework with 6 MBA credits including a course in project management. In addition, the BIOM Master of Science program will provide more experience in bioprocess development research to familiarize students with the methods, ideals and goals of independent investigation, the concepts of quality by design (QbD), and methods used in industry for design of experiments (DoE) to define design space for industrial processes. As a consequence of the stronger focus on research, BIOM Master of Science students will complete 4 credit hours of industry-focused process research mentored by their BIOM graduate advisor. Each student will submit a written thesis, which will be presented to the student's BIOM graduate advisory committee.

Student Financial Support: A limited number of full-time participants in the Master of Biomanufacturing program may be eligible for industry-sponsored graduate scholarships.

Other Relevant Information: BIOM accepts students in Spring and Fall Semesters. A 10 credit hour graduate minor is also available for NCSU students currently enrolled in other graduate programs. Two unique 12 credit Graduate Certificates: Upstream Biomanufacturing and Downstream Biomanufacturing are also offered for MR students currently enrolled in other graduate programs. Individuals interested in the BIOM program looking for more information should contact: Chris Smith, BIOM Academic Program Coordinator. (919) 513-2195, chris-smith4@ncsu.edu.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Biomathematics

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Biomathematics	Y		Y		Y		

GRADUATE FACULTY

Director of Graduate Programs:

A. L. Lloyd, Box 8213, 919/515-1910, allloyd@ncsu.edu, Mathematics

Named Distinguished Professors: Z. Zeng; Named Distinguished University Professors: H. T. Banks, C. K. Hall; Professors: K. Gross, M. Haider, J. M. Haugh, G. R. Hess, A. L. Lloyd, S. R. Lubkin, G. G. McRae, S. V. Muse, M. Olufsen, S. M. Sullivant, J. L. Thorne, H. T. Tran; Adjunct Professors: J. T. Betts, M. A. Coffin, R. B. Conolly, N. M. Haddad, C. L. Hughes, P. H. Morgan, J. T. Ottesen, R. W. Setzer, E. A. Stone; Emeritus Professors: J. W. Bishir, M. L. Hauck, K. H. Pollock, H. E. Schaffer, J. F. Selgrade, R. E. Stinner; Emeritus Named Distinguished Professors: W. R. Atchley, J. E. Riviere; Associate Professors: R. B. Langerhans, B. J. Reich, C. E. Smith; Adjunct Associate Professors: W. O. McMillan; Assistant Professors: B. S. Akpa, K. B. Flores, R. Ke, R. Sozzani; Adjunct Assistant Professors: S. Bhattacharya, G. Bobashev, J. S. Kimbell, A. Mokhtari, Q. Zhang

Biomathematics is an interdisciplinary graduate program offering courses and research opportunities in basic and applied mathematical biology. Degree programs are flexible to accommodate students with backgrounds in the biological, mathematical or physical sciences. The program also offers Ph.D. and master's-level minors. Additional information on requirements, courses, faculty and current research can be found at the website www.ncsu.edu/biomath.

Admission Requirements: Applicants should have either a Bachelor's degree in biology with evidence of aptitude and interest in mathematics, or a bachelor's in a mathematical science with evidence of aptitude and interest in biology. Advanced (multivariate) calculus, linear algebra and general biology are prerequisites for all BMA courses, and deficiencies in these should be remedied during the first year of graduate study. The application must include a narrative statement (1-2 pages) of the applicant's goals and reasons for interest in the BMA program.

Master's Degree Requirements: The M.S. and M.BMA. degrees require BMA 771-772 and one other BMA course; two upper-level biology courses; and three courses from the mathematical sciences or statistical sciences. The M.S. degree requires a thesis, and the M.BMA. requires two additional courses and a written project.

Doctoral Degree Requirements: Course requirements consist of a "core" and a "concentration" in some area of biology or mathematical sciences. Core requirements are: BMA 771-772, 773 and 774; three upper-level biology courses from at least two areas (e.g., physiology and evolution); and additional courses from the mathematical or statistical sciences. Concentration consists of either a Ph.D. co-major in a biological or mathematical science or a coherent series of five graduate courses approved by the student's committee, which must include a two-semester sequence and at least one 700-level course.

Financial Assistance: TAs (generally in the Departments of Mathematics or Statistics). RAs and internships are available. Awards are based on GRE scores, transcripts, letters of recommendation, and the personal statement. RAs usually are held by continuing students. To

receive **full** consideration for financial aid, the completed application must be received by January 15.

Other Relevant Information: All students are required to participate in the BMA Graduate Seminar. Course requirements can be met by examination or by demonstrating that an equivalent course was completed at another university.

Click on **Graduate Courses** for current course information.

NCSU Graduate Catalog

Biomedical Engineering

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Biomedical Engineering	Y		Y				

GRADUATE FACULTY

N. L. Allbritton, Department Head

Director of Graduate Programs:

C. M. Gallippi, Box 7115, cmgallip@email.unc.edu, Biomedical Engineering

Named Professors: A. E. Tonelli; Named Distinguished Professors: F. S. Ligler; Distinguished Professors: O. A. Harrysson, H. T. Nagle, M. A. Vouk; Distinguished University Professors: D. L. Bitzer; *Professors:* N. L. Allbritton, G. D. Buckner, M. Chow, P. A. Dayton, M. G. Forest, R. P. Gardner, R. E. Gorga, E. Grant, M. Haider, S. A. Hale, H. Huang, A. Ivanisevic, C. Kleinstreuer, H. Krim, A. V. Kuznetsov, W. Lin, S. R. Lubkin, M. G. McCord, J. F. Muth, R. J. Narayan, M. Olufsen, H. C. Pillsbury, A. Rabiei, J. M. Ramsey, S. C. Roe, M. K. Stoskopf; Research Professors: J. Cavanagh; Adjunct Professors: J. Cavanagh, W. C. Holton, G. Lazzi, E. G. Loboa-Polefka, B. J. Oberhardt; *Emeritus Professors:* C. F. Abrams, R. M. Grossfeld, N. A. Monteiro-Riviere, S. A. Rajala, W. E. Snyder, L. F. Stikeleather, D. E. Thrall; Associate Professors: K. Cheng, R. G. Dennis, M. Gamcsik, Z. Gu, H. Huang, D. G. Kamper, D. S. Lalush, J. M. Macdonald, C. S. Nam, K. Saul, C. E. Smith, M. A. Tommerdahl, G. M. Walker, D. A. Zaharoff; *Research Associate Professors:* O. V. Favorov, R. L. Goldberg, G. S. McCarty; Associate Professors of the Practice: A. J. DiMeo; Adjunct Associate Professors: G. S. Sawicki; Assistant Professors: A. C. Brown, Y. Brudno, J. Cole-Husseini, M. Daniele, M. B. Fisher, J. R. Franz, D. O. Freytes, C. M. Gallippi, S. M. Gomez, X. Hu, G. F. Pinton, M. Sano; Adjunct Assistant Professors: M. Mohiti Asli; Teaching Associate Professors: L. A. Cartee, H. Orun

The Joint Biomedical Engineering Graduate Program is administered by the combined biomedical engineering graduate faculty from both North Carolina State University and University of North Carolina at Chapel Hill. The joint program also has close working relations with the Research Triangle Institute and industry within the Research Triangle area. These associations enable students to obtain research training in a wide variety of fields and facilitate the selection and performance of dissertation research. The department, thus, provides students with excellent opportunities to realize the goal of enhancing medical care through the application of modern technology.

Biomedical engineering is a dynamic field stressing the application of engineering techniques and mathematical analysis to biomedical problems. Faculty research programs are key to the program, and they include five primary research directions: rehabilitation engineering, regenerative medicine, biomedical imaging, microsystems engineering, and pharmacoengineering. The department offers graduate education in biomedical engineering leading to the master of science and doctor of philosophy degrees.

Students enter this program with backgrounds in engineering, physical science, mathematics or biological science. Curricula are tailored to fit the needs and develop the potential of individual students. In addition, courses in statistics, mathematics, life sciences and engineering sciences provide a well-rounded background of knowledge and skills.

Admission Requirements: Students must satisfy all entrance requirements for The Graduate School of the University of North Carolina at Chapel Hill or the Graduate School at North Carolina State University, and must demonstrate interest and capability commensurate with the quality of the biomedical engineering program. Prospective students may apply to the graduate school at either UNC–Chapel Hill or NC State. All applicants are considered together as a group. Generally, applications should be submitted by December 11 for consideration for admission in the coming fall semester. Applicants are expected to present Graduate Record Examination (GRE) scores; verbal scores should be at or above the 50th percentile and quantitative scores should be at or above the 70th percentile to be competitive. Admitted students are expected to have an average grade of B (cumulative GPA 3.30) or better and are encouraged to have undergraduate research experience. The program requires that a one-to-three page personal statement about research interest and background be submitted.

Students should have a good working knowledge of mathematics at least through differential equations, plus two years of physical or engineering science and basic courses in biological science. Deficiencies in preparation can be made up in the first year of graduate training

Doctoral Degree Requirements: A minimum of 52 semester hours of graduate work is required (beyond the Bachelor's degree). Degree candidates in this program are expected to obtain experience working in a research laboratory during their residence and to demonstrate proficiency in research. The Ph.D. dissertation should be judged by the graduate committee to be of publishable quality. The student must meet the Graduate School's residency requirement at

UNC-CH or NC State as appropriate. Further information on the BME Ph.D. program can be found on the department website.

Required and highly recommended courses: Students are required to take a BME Seminar each semester which is offered at both UNC-CH and NC State. Students must also complete six credits of graduate engineering topics, six credits of graduate life science topics, three credits of engineering mathematics, and three credits of statistics. Students may choose from a number of courses to meet these requirements. Such choices are made in consultation with the student's academic advisor and the Director of Graduate Programs/Studies.

Comprehensive and Qualifying Examinations: Doctoral students qualify for the Ph.D. degree by meeting grade requirements in their core courses, and then advance on to written and oral preliminary exams before admission to candidacy. Details can be found on the <u>department</u> website.

Click on Graduate Courses for more current course information.

For UNC courses, see UNC Graduate Record.

NCSU Graduate Catalog

Biotechnology (Minor Program)

Professor R. M. Kelly, Director Box 7512 919.515.4230

Email: rmkelly@ncsu.edu

Home page: http://biotech.ncsu.edu

The Biotechnology Program includes faculty from over 20 departments in the Colleges of Agriculture and Life Sciences, Science, Engineering, Natural Resources and Veterinary Medicine Courses in the program provide hands-on experience in cutting-edge research techniques, as well as experimental design and analysis. The graduate minor is available to students who successfully complete six to eight credit hours in selected laboratory core courses described below and conduct their graduate thesis research in an area of biotechnology. Graduate students must include the minor in their Plan of Work, and at least one member of the student's thesis committee must be a member of the <u>Biotechnology faculty</u>.

REOUIRED (4 credits)

BIT 510 Core Technologies in Molecular and Cellular Biotechnology (4 credits)

BIOTECHNOLOGY LABORATORY ELECTIVES (2 credits each)

For a complete listing of all elective courses, please visit the <u>BIT website</u>. Some of these include: BIT 564 Protein Purification
BIT 566 Animal Cell Culture

BIT 567 PCR and DNA Fingerprinting

BIT 571 RNA interference and model organisms BIT 572 Proteomics BIT 574 Plant Genetic Engineering

Students may be approved by an <u>Academic Coordinator</u> of the BIT Program to place out of BIT 510 if they have substantial practical experience and conceptual knowledge of the material covered, and can then instead take one additional 2-credit BIT advanced laboratory elective course (completing the minor requirements with 6 credits of coursework rather than 8).

Business Management

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Business Administration					Y		

GRADUATE FACULTY

B. L. Kirkman, Department Head

Director of Graduate Programs:

S. G. Allen, Box 8114, 919/515-5584, steve_allen@ncsu.edu, Business Management

Named Distinguished Professors: J. Carr, H. S. Heese; Named Distinguished University Professors: R. B. Handfield; Distinguished Professors: S. W. King; Professors: S. G. Allen, P. Arasu, S. H. Barr, J. W. Bartley, J. D. Bohlmann, C. C. Bozarth, M. Bradford, J. F. Brazel, Y. A. Chen, R. L. Clark, D. H. Henard, B. L. Kirkman, S. K. Markham, R. C. Mayer, A. Padilla, D. P. Pagach, F. C. Payton, B. B. Tyler, M. D. Walker, R. S. Warr, I. R. Weiss; Professors of the Practice: L. Shamblin; Adjunct Professors: R. E. Kouri; Emeritus Named Professors: C. P. Jones; Emeritus Professors: D. L. Baumer, G. W. Dickson, D. M. Holthausen; Associate Professors: B. R. Danielsen, J. B. Earp, J. A. Ellis, E. Kemahlioglu-Ziya, S. Krishnamurthy, K. Mitchell, P. W. Mulvey, J. M. Pollack, M. A. Stanko, J. S. Stonebraker, D. P. Warsing, G. S. Young, G. J. Zuckerman; Adjunct Associate Professors: C. M. Newmark; Emeritus Associate Professors: S. N. Chapman, K. S. Davis, C. W. Harrell, J. K. McCreery, E. A. McDermed, J. C. Poindexter; Assistant Professors: N. M. Bhawe, H. J. Dretsch, S. M. Robinson, J. D. Smith, Q. Wu; Adjunct Assistant Professors: M. D. Kowolenko; Lecturers: T. E. Balan, G. M. Devine

The Master of Business Administration (MBA) program develops business leaders for tomorrow's global markets and technologies. The Jenkins MBA program provides students with the requisite foundation in general business management, while also allowing time to focus on an area of particular interest. In pairing academic excellence with real-world experience, Jenkins

MBA students are ready to meet global challenges head-on with practical, technology-driven solutions.

Students may choose to pursue an MBA through one of four platforms: the Full-time program on NC State's main campus; the Professional Evening program with locations on NC State's main campus as well as a RTP location; or the Online program.

Admission Requirements: In addition to the basic Graduate School admission requirements, MBA applicants must submit recent GMAT or GRE scores. Admission decisions are based on academic performance and potential, GMAT or GRE scores, essays, recommendations, relevant work experience and an interview. Students must have previous coursework in statistics before entering the program. For further information, please visit the MBA website at www.mba.ncsu.edu.

Master of Business Administration: The MBA program requires every student to complete the core curriculum that includes coursework in accounting, economics, finance, marketing, operations / supply chain, organizational behavior, statistics and strategy, as well as communications and critical thinking and writing. Full-time students must complete a minimum of 56 credit hours; Professional Evening and Online students must complete a minimum of 40 credit hours.

Additional Requirements

Full-time: In addition to the core curriculum, students must complete a minimum of 12 elective hours within a concentration; an advanced analytics course; and a practicum. Students then have the opportunity to choose from a variety of elective courses to meet the 56 credit hour minimum.

Professional Evening and Online: In addition to the core curriculum, students must complete a minimum of 6 elective hours within an area of emphasis; an advanced analytics course; and a practicum. Students then choose from a variety of elective courses to meet the 40 credit hour minimum.

Minor in Management: Students enrolled in Master's and doctoral programs can complete the minor by taking courses that meet requirements within the MBA degree. Master's students must take 9 hours; doctoral students must take 15 hours.

Click on **Graduate Courses** for current course information.

NCSU Graduate Catalog

The Department of Agricultural and Extension Education offers a Graduate Certificate in Agricultural and Extension Education. The program focuses on developing knowledge and skills needed to be effective teachers of agriculture in the public schools and community colleges or to work as an educator with the Cooperative Extension Service or in other non-formal educational settings such as public gardens, nature centers and in international development. Admissions: Students apply online by visiting the Graduate School's website and completing an ApplyYourself online application. Students currently in a graduate degree program should

contact the program director for information regarding adding the certificate program to an existing degree program.

Requirements: The certificate program involves completion of 15 credit hours and the preparation of a professional portfolio. The career goals of the student will determine which sequence of courses to take.

Agricultural Education Focus	Extension Education Focus
AEE 500 Agricultural Education, Schools and	AEE 501 Foundations of Agricultural and
Society	Extension Education
AEE 501 Foundations of Agricultural and	AEE 521 Program Planning in Agricultural and
Extension Education	Extension Education
AEE 503 Youth Program Management	AEE 523 Adult Education in Agriculture
AEE 522 Occupational Experience in	AEE 533 Leadership and Management of
Agriculture	Volunteers in Agricultural and Extension
	Education
AEE 524 Coordinating the High School	AEE 560 Organizational and Adminstrative
Agricultural Education Program	Leadeship in Agricultural and Extension
	Education
AEE 529 Curriculum Development in	AEE 577 Evaluation in Agricultural and
Agricultural and Extension Education	Extension Education
AEE 535 Teaching Agriculture in Secondary	AEE 705 International Agricultural
Schools	Development
AEE 641 Practicum in Agricultural and	AEE 641 Practicum in Agricultural and
Extension Education	Extension Education
AEE 735 Effective Teaching in Agriculture and	
Life Sciences	

Students who are are interesting in obtaining teacher licensure from the state of North Carolina should make their intentions known to the program director so that specific state requirements are met. Directions for preparing the professional portfolio can be obtained from the program director.

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The Administration and Leadership certificate is closed to new student enrollment. Please visit the Department of Youth, Family, and Community Sciences website for information on our current certificate offerings.

The Department of Youth, Family, and Community Sciences (YFCS) at North Carolina State University is proud to offer graduate distance education programs designed to prepare and strengthen current and future professionals. The Youth, Family, and Community Sciences online programs create and advance the careers of those who work with youth and/or families in community-based settings.

Admissions: Students apply online at http://www.ncsu.edu/grad/applygrad.htm.

Requirements: A Graduate Certificate in Administration and Leadership – Family and Youth Programs requires a total of 12 credit hours. Nine (9) credit hours are required courses, with the remaining 3 credit hours of electives. All courses are offered online only.

Required Courses (9 credit hours)

FYD 550 Youth and Family Professionals as Leaders FYD 554 Collaborations and Partnerships in Youth and Family Settings FYD 556 Organizational Systems in Youth and Family Settings

Electives (3 credit hours)

Approved course in Family Life and Youth Development (FYD)

The Graduate Certificate in Climate Adaptation program at NC State University provides accredited, academic training in the emerging field of climate adaptation. The online, twelve credit program is designed to provide mid-career professionals and entry-level students with technological skills and specialization in climate adaptation. The certificate is a fully accredited credential and a potential path toward the Climate Adaptation degree program. Coursework includes Fundamentals of Climate Change Science, Climate Risk Analysis, Climate Communication and Introduction to Geographic Information Systems.

Admission Requirements: Applicants must meet one of the 3 following requirements:

- Be a graduate of an accredited four-year college or university, and have a GPA of at least 3.0 on a 4-point scale in their last 60 credit hours of undergraduate study.
- Have a Master's degree.
- Be a degree student in good standing in a NC State University graduate program.

We recommend that students in a NC State University graduate program may apply after completing two of the courses required for the graduate certificate program with at least B grades. The graduate certificate program Director will manage the admissions process in consultation with the MEAS Director of Graduate Programs.

Provisional Admission: Applicants who do not meet the graduate certificate program requirements for full admission may be admitted provisionally based on the quality of their letters of recommendation and other criteria at the discretion of the Certificate Program Director and MEAS Director of Graduate Programs. Students who are admitted provisionally must maintain a 3.0 GPA in order to obtain full admission into the certificate program.

Program of Study: The graduate certificate requires a minimum of 12 hours, and includes the following courses:

MEA 517 Fundamentals of Climate Change Science

- MEA 518 Climate Risk Analysis
- MEA 519 Barriers to Climate Change Literacy
- GIS 510 Introduction to Geographic Information Science

The department of Leadership Policy, Adult and Higher Education (AHE) within the College of Education at North Carolina State University offers a graduate certificate program in Community College Teaching.

The program focuses on developing the knowledge and skills necessary to design and deliver course-related content through technology-enhanced learning environments for faculty who teach in community colleges and other post secondary settings or plan on teaching in the near future. The courses developed for the graduate certificate will enhance faculty abilities in both online and classroom environments. The key goal for the online Graduate Certificate Program in Community College Teaching is to provide high quality content and instruction for the systematic development of instructional expertise for community college and other post-secondary faculty.

Curriculum. The Graduate Certificate Program in Community College Teaching consists of 15 credit hours of coursework (five courses, three credits each). The courses are listed below.

Required:

EAC 559 The Adult Learner

EAC 538 Instructional Strategies in Adult and Community College Education

EAC 560 Assessment and Evaluation in Adult and Higher Education

EAC 700 Community College and Two-year Postsecondary Education

EAC 539 Teaching in an Online Environment

For more information about the program and for application procedures, please see the CCTeach Online website.

The Graduate Certificate in City Design is a joint program between the School of Architecture and the Department of Landscape Architecture. In addition, the Graduate Certificate in City Design is an interdisciplinary and inter-university initiative, reflecting the nature of city design practice. The program aims to bring together students and faculty from landscape architecture, architecture, and city and regional planning into an interactive and team-based learning context.

The City Design program promotes design inquiry and application at the scale of the city for students and practitioners of architecture, landscape architecture, and city and regional planning. The program's objectives are to consider the human condition, particularly in making signification urban places; design integrated system of movement with increased accessibility; promote a greater mix of uses and amenities within a well-scaled urban fabric; foster new opportunities for energy production, collection and saving at the local scale; define new means of 'greening' the city; and capture greater senses of identity, meaning, and quality within the city fabric.

Admissions: Applicants must complete an application form to be considered for the certificate program. To qualify for admission to the certificate program, students must be enrolled in (or have completed) a professional program in architecture. At the time of application, students must have a 3.00 grade point average (GPA) in their professional degree program.

Requirements: Students must complete 15 hours of coursework from the course menu, as specified in the certificate application, and have a minimum of 3.00 GPA on all certificate coursework. All grades on courses taken towards the certificate program in courses numbered 400 and above are included in the GPA. Courses at the 300 level and below are not eligible for certificate credit and subsequently do not affect the graduate GPA.

The minimum grade to receive certificate credit can be no lower than B-. Students who take letter-graded 400-, 500-, and 700-level courses do not have the option of taking the courses for 'credit only' if they intend for the course to be part of the graduate certificate. Transfer credit from other institutions is not allowed for the graduate certificate. All course work must be registered through NC State University.

All certificate requirements must be completed within four (4) calendar years, beginning with the date that the student commences courses applicable to the certificate, unless a more restrictive time limit has been established by the program or academic college/school.

A student may obtain more than one certificate. Each certificate must have a least nine (9) credit hours that are unique to it.

Other Information: Students in City Design certificate program will join an academic and professional community that offers a broad range of extracurricular activities, including the College of Design annual Urban Design Conference, visiting lecturers, colloquia, and *City Forum*, a regularly scheduled series of brown bag discussions coordinated by the City of Raleigh Urban Design Center.

Note that academic success might have a strong bearing on admission to a degree program, but completion of the certificate program in no way guarantees entry into a graduate degree program. For more information regarding course requirements and the application process, please contact the certificate program coordinator.

Graduate Certificate Program (online): Our innovative online program prepares school teachers, administrators, staff, advisors, tutors in schools and universities, human service workers, and individuals interested in counseling work to advocate and support students, their families, clients and local communities. Our certificate program allows students to learn in a flexible environment, with flexible online classwork, without the hassle of traffic and on-campus parking. Students will meet online each week for a 90-minute interactive discussion with the professor, instructors and classmates, in order to stay connected and challenged. The certificate program alone does not prepare students to work as professional counselors. In order to work in professional counseling, additional classes, training and licensure will be required through a master's degree program.

Admission Requirements: Applicants should have a 3.0 GPA but may be admitted provisionally based on related graduate classes completed in the field of education, human services or training and development, and, ultimately, by earning at least a "B" (3.0) average in the first GCCE class.

- Completed online Graduate School application and admission fee
- Resume outlining education and work experience

Admission to the GCCE online program takes place in the spring for a summer start. Rolling base admissions are possible if seats are available. Email us at ncsu_gcce@ncsu.edu with any questions.

Graduate Certificate in Counselor Education Requirements: Students admitted to this program are required to complete four online courses: ECD 510 Orientation to Professional Counseling, Identity, and Ethics, ECD 530 Theories of Counseling, ECD 524 Career Counseling, and ECD 525 Multicultural Counseling.

Chemical and Biomolecular Engineering

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Chemical Engineering	Y		Y		Y		

GRADUATE FACULTY

P. S. Fedkiw, *Department Head*

Director of Graduate Programs:

S. A. Khan, Box 7905, 919/515-4519, khan@ncsu.edu, Chemical and Biomolecular Engineering

Named Professors: M. D. Dickey, H. Jameel, R. M. Kelly, S. A. Khan, G. N. Parsons, O. D. Velev; Named Distinguished Professors: R. G. Carbonell, J. M. DeSimone, B. Pourdeyhimi; Named Distinguished University Professors: K. E. Gubbins, C. K. Hall; Distinguished Professors: J. Genzer, R. J. Spontak; Distinguished University Professors: D. F. Ollis; Professors: C. M. Balik, P. S. Fedkiw, M. C. Flickinger, R. E. Gorga, C. S. Grant, J. M. Haugh, H. H. Lamb, P. K. Lim, P. R. Westmoreland; Adjunct Professors: C. R. Daubert, M. Schoen, M. Sliwinska-Bartowiak; Emeritus Named Professors: R. M. Felder, H. B. Hopfenberg; Associate Professors: C. Beisel, J. S. Jur, F. Li, S. W. Peretti, B. M. Rao; Research Associate Professors: K. Efimenko; Adjunct Associate Professors: J. Srogl; Assistant Professors: M. Abolhasani, N. C. Crook, L. C. Hsiao, A. J. Keung, S. Menegatti, G. T. Reeves, A. San Miguel Delgadillo, E. E. Santiso, Q. Wei; Adjunct Assistant Professors: P. V. Gurgel; Extension Associate Professors: H. Winston; Teaching Associate Professors: G. L. Gilleskie; Teaching Assistant Professors: J.

Research activities in the department include: computational nanoscience and biology; biomolecular engineering and biotechnology; catalysis, combustion, kinetics and electrochemical engineering; biofuels and renewable energy technology; green chemistry and engineering; innovative textiles, polymers and colloids; nanoscience and nanoengineering; and thermodynamics and molecular simulation.

Admissions Requirements: Students admitted to the graduate program normally have a Bachelor's degree in chemical engineering or its equivalent. Students with undergraduate degrees in chemistry, physics or other engineering disciplines may be admitted but will be required to make up undergraduate course work deficiencies in chemical engineering without graduate credit. The most promising candidates will be accepted up to the number of spaces available.

Master of Science Degree Requirements: The M.S. degree requires a minimum of 30 credit hours. A set of four core courses is required. Two options are provided. In the thesis option, the thesis must be defended in a final public oral examination. In the non-thesis option, the student must satisfactorily complete a total of 10 graduate courses. A unique feature of the non-thesis option is the availability of a Distance Education Masters in which the students can complete all 30 credit hours remotely through online courses offered via streaming videos without being on campus.

Master of Chemical Engineering Degree Requirements: The M.Ch.E. degree requires a minimum of 30 credit hours. A set of four core courses is required. A three-credit project is also required.

Doctor of Philosophy Degree Requirements: Students normally take a set of five core courses, two advanced courses and at least 6 credits of dissertation research. A thesis is required; this must be defended in a final public oral examination. In addition, the candidate must: (1) submit and defend an original written proposition in any area of chemical engineering, and (2) submit and defend a proposal to perform his/her thesis research.

Click on <u>Graduate Courses</u> for current course information.

NCSU Graduate Catalog

Chemistry

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Chemistry	Y						

GRADUATE FACULTY

E. F. Bowden, *Department Head*

Director of Graduate Programs:

D. A. Shultz, Box 8204, 919/515-6972, shultz@ncsu.edu, Chemistry

Named Distinguished Professors: D. W. Brenner; Named Distinguished University Professors: J. S. Lindsey, B. M. Novak; Professors: E. F. Bowden, C. L. Bumgardner, F. N. Castellano, S. Franzen, C. B. Gorman, J. D. Martin, C. C. Melander, D. C. Muddiman, M. T. Oliver-Hoyo, D. A. Shultz, A. I. Smirnov, M. H. Whangbo; Adjunct Professors: A. Deiters, M. Khaledi; Emeritus Professors: A. J. Banks, R. D. Bereman, H. H. Carmichael, D. L. Comins, L. D. Freedman, F. W. Getzen, K. W. Hanck, F. C. Hentz, M. Khaledi, R. H. Loeppert, C. G. Moreland, S. T. Purrington, A. F. Schreiner, W. P. Tucker, J. L. Whitten; Associate Professors: C. B. Boss, R. A. Ghiladi, T. B. Gunnoe, E. A. Ison, E. Jakubikova, P. A. Maggard, A. A. Nevzorov, T. I. Smirnova, L. A. Sombers, W. L. Switzer, D. W. Wertz, G. J. Williams; Research Associate Professors: G. S. McCarty; Assistant Professors: W. Chang, D. Fourches, V. Lindsay, J. G. Pierce, C. Proulx, G. Wang, W. W. Weare

The Department of Chemistry offers programs of study leading to the Doctor of Philosophy and Master of Science degrees. These degrees are based on coursework and original research. Many research projects merge disciplines such as chemical/synthetic biology, biophysics/physics, computational science, informatics, photonics/photophysics and materials science with chemistry. General courses as well as advanced and special topics courses are offered.

Admission Requirements: Applicants should have an undergraduate degree in chemistry or in a closely related field with a strong chemistry background. A GPA of at least 3.0 in the sciences is needed for consideration. GRE General Test scores are required, and the Subject Test is recommended. Admission decisions are made as completed applications are received. For most favorable consideration for the Fall term, all application materials should be received by January 15(both domestic and international students).

Master's Degree Requirements: The Master of Science (M.S.) degree in chemistry is a research degree that requires six graduate courses, a minimum of 30 credit hours, and research leading to a thesis.

Doctoral Degree Requirements: In the doctoral program, emphasis is placed on original research and a comprehensive knowledge of one's chosen field.

Student Financial Support: Incoming graduate students are supported by departmental teaching assistantships. Outstanding applicants are eligible for supplemental fellowships during their first year of study. Research assistantships are normally available to second-, third-, and fourth-year students. The department also has fellowships for students interested in the area of electronic

materials, biotechnology and pharmaceutical and synthetic organic chemistry, as well as department-funded Chemistry Scholars Graduate Research Assistantships.

Other Relevant Information: The Chemistry Department forms part of the College of Sciences. More than one dozen new faculty members have been added in the last ten years, thereby greatly enhancing opportunities for graduate research especially in cutting edge interdisciplinary programs.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Civil, Construction, and Environmental Engineering

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Civil Engineering	Y		Y		Y		
Environmental Engineering			Y		Y		

GRADUATE FACULTY

M. A. Barlaz, Department Head

Director of Graduate Programs:

S. Ranjithan, Box 7908, 919/515-6979, ranji@ncsu.edu, Civil, Construction, and Environmental Engineering

Distinguished Professors: E. J. Jaselskis; Distinguished University Professors: M. A. Barlaz, H. C. Frey, Y. R. Kim; Named Distinguished Professor: M. Liu; Professors: S. Arumugam, J. W. Baugh, E. D. Brill, F. De Los Reyes, J. Ducoste, M. A. Gabr, M. N. Guddati, A. Gupta, T. Hassan, M. I. Hoit, D. R. Knappe, M. J. Kowalsky, G. F. List, G. Mahinthakumar, J. M. Nau, M. F. Overton, M. S. Rahman, S. Ranjithan, W. J. Rasdorf, N. M. Rouphail, R. Seracino, A. A. Tayebali, J. V. Veliadis, B. M. Williams; Research Professors: B. L. Edge; Adjunct Professors: M. G. Calvi, B. Kasal; Emeritus Professors: M. Amein, R. C. Borden, R. H. Borden, J. F. Ely, J. S. Fisher, A. K. Gupta, K. S. Havner, C. L. Heimbach, Y. Horie, N. P. Khosla, M. L. Leming, V. C. Matzen, S. W. Nunnally, S. Rizkalla, J. R. Stone, C. C. Tung, H. E. Wahls; Emeritus Distinguished Professors: D. W. Johnston; Emeritus Distinguished University Professors: J. M. Hanson, P. Z. Zia; Associate Professors: E. Z. Berglund, J. F. DeCarolis, J. Johnson, M. Pour-Ghaz, B. S. Underwood; Adjunct Associate Professors: W. L. Bingham, A. C. Chao, J. C. Smith; Assistant Professors: A. Albert, T. Aziz, E. Bardaka, A. M. Cabas Mijares, D. F. Call, C.

A. Castorena, J. C. Dietrich, F. Garcia Menendez, A. P. Grieshop, K. Han, J. P. Kearns, B. M. Montoya, D. R. Obenour, A. C. Ortiz, J. F. Patrick; *Research Assistant Professors:* J. W. Levis, G. W. Lucier, E. J. Sciaudone; *Adjunct Assistant Professors:* A. R. de Queiroz, D. J. Findley; *Teaching Assistant Professors:* K. Salamati

Graduate programs are offered in coastal and water resources engineering, computing and systems, construction engineering and management, environmental engineering, geotechnical and geoenvironmental engineering, mechanics and materials, structural engineering and mechanics, transportation engineering and materials.

Admission Requirements: Normal minimum GPA requirements include 3.0 overall and in the major. Students who do not meet these academic requirements may take graduate courses through the Non Degree Studies program to demonstrate academic ability, but consultation with the Director of Graduate Programs is strongly advised. Applicants without academic experience in civil engineering, construction engineering, or environmental engineering may be required to take undergraduate courses to remove deficiencies, but graduate credit is not given for these courses. The Graduate Record Examination is required for all international applicants and all applicants to the MSCE or MSENE degree programs.

Master's Degree Requirements: Four Master's degrees, requiring a minimum of 30 or 31 credit hours, are available. At least two-thirds of a Master's program should be in a well-defined major area of concentration. The MCE is a non-thesis (Option B) degree with other requirements, such as independent projects or core courses, specified in some areas of specialization. A formal minor is not permitted. The MCE is available both on-campus and through distance education. The MSCE degree requires a thesis and a formal minor is optional. Requirements for the MENE and MSENE are the similar to those for the CE degrees.

Doctoral Degree Requirements: The Ph.D. typically requires one year of full-time course work beyond the master's degree and research culminating in a dissertation. The program must develop a well-defined major area of concentration and may include supporting courses outside the major or a formal minor in a related field. All specialty areas, including Environmental Engineering, are included in the one Ph.D. program.

Student Financial Support: Departmental teaching and research assistantships are available including coverage of tuition and health insurance. Fellowships -- full or supplemental to an assistantship -- are available for exceptional applicants. All financial aid recipients are selected on merit-based competition with other applicants. Applications requesting financial aid (both U.S. and international) should be submitted early: February 1 for Fall admission and by July 15 for Spring admission.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Cognitive Science (Minor Program)

Dr. Ronald P. Endicott, Program Director Department of Philosophy and Religious Studies

NCSU Box 8103 Phone: 919.515.6195

Email: ron_endicott@ncsu.edu

Cognitive Science is an area of interdisciplinary research that seeks to understand the nature, processes, and evolution of mind. The Cognitive Science Program is administered by the Department of Philosophy and Religious Studies and supported by a strong faculty drawn from the fields of Psychology, Neurobiology, Computer Science, Linguistics, and Philosophy. The program thus fosters development of ideas and theories within the disciplines of Cognitive Science, for example, theories of rational agency, logical reasoning, cognitive processing, computational psychology, artificial intelligence, neurobiology, and the evolution of cognitive systems.

Requirements: Graduate students who minor in Cognitive Science must complete a minimum of nine hours of courses (or more as determined by the student's committee), with a grade of B or better, distributed as follows.

One core courses (3 hrs):

PHI/PSY 525 Introduction to Cognitive Science

Two additional courses (6 hrs) outside the degree-granting program from the following:

PSY 500 Visual Perception

PSY 502 Physiological Psychology

PSY 508 Cognitive Processes

PHI 540 The Scientific Method

CSC 520 Artificial Intelligence I

CSC 522 Automated Learning and Data Analysis

CSC 707 Automata, Languages and Computability Theory

CSC 720 Artificial Intelligence II

ENG 524 Introduction to Linguistics

ENG 584 Studies in Linguistics

ZO 588 Neurobiology

Any student who has previously completed the equivalent of the above core course for credit toward another degree (e.g., PHI/PSY 425 as an undergraduate) is required to complete an additional course (3 hours) from the above list.

Up to three credits of equivalent graduate course work may be accepted in the place of one course on the list above, subject to the approval of the Director for the Cognitive Science Program.

Graduate Students who wish to minor in cognitive science must declare the minor on their Graduate Plan of Work, which they develop with their graduate advisory committee. This committee must include a representative of the minor, and the student must send a copy of the Plan of Work to the Director of the Cognitive Science Program.

College of Education Dean's Office

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Teaching				Y			

GRADUATE FACULTY

Directors of Graduate Programs:

- J. K. Lee, Box 7801, 919/513-0126, <u>jklee@ncsu.edu</u>, Teacher Education and Learning Sciences J. T. DeCuir-Gunby, Box 7801, 919/513-7669, <u>jessica_decuir@ncsu.edu</u>, Teacher Education and Learning Sciences
- M. J. Jeffries, Box 7271, <u>mjjeffri@ncsu.edu</u>, Teacher Education and Learning Sciences S. J. Carrier, Box 7801, 919/513-2808, <u>sjcarrie@ncsu.edu</u>, Teacher Education and Learning Sciences

Professors: C. L. Crossland, D. A. Cullinan, G. M. Kleiman, H. S. Lee, J. K. Lee, E. J. Sabornie;
Emeritus Professors: C. A. Pope, R. J. Pritchard; Associate Professors: M. R. Blanchard, J. H. Hunt, S. Park, M. M. Thomson, T. A. Walkowiak; Emeritus Associate Professors: V. W. DeLuca, S. S. Osborne; Assistant Professors: K. Busch, C. Delgado, C. D. Denson, D. L. Gray, C. C. Lee, J. N. Pearson; Adjunct Assistant Professors: S. B. Freeman; Teaching Assistant Professors: D. E. Benge, C. P. Edgington, M. J. Jeffries, J. G. Koch, P. M. Shumaker Jeffrey

The Master of Arts in Teaching (MAT) program is an accelerated teacher licensure program that leads students to both an initial teaching license and a master's degree in as little as a year and a half of full-time study. The program is distinct in its focus on practice and by conducting some face-to-face classes in a public school facility. The content areas being served by the MAT program are Secondary Math, Science, Social Studies, and English; Middle Grades (Language Arts or Social Studies); English as a Second Language; K-12 Reading; Special Education; and Elementary Education.

For more please see https://ced.ncsu.edu/academics/professional-education/master-of-arts-in-teaching/

The NC Department of Public Instruction has conferred accreditation to the graduate programs in Teacher Education and Learning Sciences. The College of Education is approved any the Council for the Accreditation of Educator Preparation (CAEP).

Admission Requirements: Applicants must have (1) a four-year degree from a college or university that holds regional accreditation, such as SACS; (2) 3.00 GPA or higher in prior work, as required by the Graduate School; (4) an undergraduate degree in the content area/discipline or 24 semester hours/credits in content relevant to the area in which you wish to teach (if you have fewer than 24 hours in a relevant content field, or if your course work does not prepare you adequately to teach the North Carolina curriculum, you may be assigned additional course work to overcome the deficiency).

Applications require original transcripts, 3 letters of recommendation (one of which should speak to teaching potential), a personal essay stating applicant's background and goals, GRE scores (and TOEFL if you have international citizenship), and a completed online application.

Master's Degree Requirements: A total of 30-33 credit hours must be earned for completion of the degree, depending on the particular licensure area. These hours include student teaching for non-lateral entry students.

Student Financial Support: Financial aid is available. Interested students should complete a <u>Financial Aid Federal Student Aid (FAFSA)</u> form.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

College of Humanities & Social Sciences

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Communication Rhetoric and Digital Media	Y						

GRADUATE FACULTY

Director of Graduate Programs:

H. J. Burgess, Box 8105, hjburges@ncsu.edu, English

Distinguished University Professors: C. M. Anson; Professors: D. M. Berube, M. P. Carter, D. P. Dannels, V. J. Gallagher, J. Goodwin, M. G. Gordon, J. K. Jameson, M. A. Johnson, H. D. Kellner, W. J. Kinsella, A. M. Penrose, R. L. Schrag, J. Swarts, J. N. Wall, K. S. Zagacki; Emeritus Professors: W. J. Jordan, C. R. Miller; Associate Professors: A. R. Binder, H. J. Burgess, E. A. Craig, A. A. de Souza e Silva, H. Ding, C. J. Fedukovich, P. C. Fyfe, O. Gelley,

S. M. Katz, J. Kiwanuka-Tondo, K. A. Kosenko, D. A. Orgeron, D. M. Rieder, S. R. Stein, T. L. Stinson, R. A. Walsh, S. B. Wiley; *Emeritus Associate Professors:* D. H. Covington, R. S. Dicks; *Assistant Professors:* G. Bollmer, F. D. Cason, C. Ingraham, A. R. Johnston, N. M. Lee, S. L. Pigg, N. T. Taylor, E. M. Winderman

The Ph.D. Program in Communication, Rhetoric, and Digital Media prepares doctoral students to analyze the social, cultural, rhetorical, philosophical, and political dimensions of information technologies, new communication media, and digital texts and to actively engage digital media through research, criticism, production, and practice.

Students work with program faculty from the departments of Communication and English and with affiliated faculty from departments across the university to study oral, written, visual, computational, and multimodal forms of communication and rhetoric and digital media; to examine the transformation of communication in the context of converging digital media and communication networks; and to address the theoretical challenges of innovative, interdisciplinary research.

Students can create programs of study in areas such as Social Networks and Social Media, Interpersonal Communication, Environmental Communication, Emerging Digital Genres, Multimedia Research in Digital Media, Digital Humanities, Digital Rhetoric, Visual Rhetoric, Digital Media Production, STS and Risk Communication; Organizational Communication, Mobile Communication, Technology and Pedagogy, Game Studies, Online Information Design, Public Relations, Digital Literacies and Composition, Transcultural Communication, Visual Communication, and Cultural Studies.

Faculty guide students in this work by using a broad range of social scientific and humanistic methods in which they specialize. The program offers comprehensive mentoring for professional development, diverse opportunities for teaching experience, and research assistantships associated with grant-funded faculty projects. CRDM faculty and students collaborate with colleagues in science and technology fields across the university and the Research Triangle.

Our graduates have been very successful finding employment in a variety of positions in academia (both at research-intensive universities and at teaching-oriented liberal arts colleges), government and corporate organizations, where there is a growing demand for the interdisciplinary skill sets developed in CRDM.

See our website for more details.

Admission Requirements: Master's degree in Communication, English, Rhetoric, or other relevant field with GPA of 3.0 or better. Master's level work should include one quantitative or qualitative methods course, as well as three courses in an approved <u>disciplinary area</u>. These hours do not count toward the doctoral degree. Disciplinary areas include: composition studies, including writing across the curriculum, interpersonal/group communication, media studies, organizational communication or public relations, rhetorical studies, and technical communication.

Applicants who are otherwise well qualified may make up these courses after admission. GRE scores no older than five years, three reference letters, a statement of goals and interests, a resume of work experience, and a writing sample are also required for application to the program. The application deadline is December 01.

Ph.D. Degree Requirements: A minimum of 56 hours beyond the Master's degree are required to complete the Ph.D. program: 15 credit hours of core courses, 3 hours of research methods, 6 hours of professional preparation, 12 hours in an elective focus area, and 20 hours of research and dissertation.

Student Financial Support: The CRDM program offers a limited number of Teaching Assistantships, with a stipend, health insurance, and tuition (excluding fees). Teaching Assistants will be assigned according to their interests and qualifications, as well as departmental need, to either the Communication or the English Department with the possibility of teaching in both departments during their course of study. Those who do not have sufficient qualifications to teach in the first semester will participate in a training program. Some Research Assistantships may also be available.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Communication

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Communication			Y				

GRADUATE FACULTY

K. S. Zagacki, Department Head

Director of Graduate Programs:

A. R. Binder, Box 8104, 919/515-9750, arbinder@ncsu.edu, Communication

Professors: D. M. Berube, D. P. Dannels, V. J. Gallagher, J. Goodwin, J. K. Jameson, M. A. Johnson, J. Keyton, W. J. Kinsella, R. L. Schrag, K. S. Zagacki; *Emeritus Professors:* E. T. Funkhouser, W. J. Jordan, C. A. Smith; *Associate Professors:* A. R. Binder, E. A. Craig, A. A. de Souza e Silva, D. A. DeJoy, J. Kiwanuka-Tondo, K. A. Kosenko, S. R. Stein, S. B. Wiley;

Emeritus Associate Professors: D. A. DeJoy, E. T. Funkhouser, R. Leonard, B. L. Russell; *Assistant Professors:* G. Bollmer, A. Cheng, R. J. Hurley, C. Ingraham, N. M. Lee, L. K. Romo, N. T. Taylor, E. M. Winderman; *Teaching Assistant Professors:* E. A. Nelson

The Master of Science program in communication is designed to provide graduate-level expertise for solving problems in modern organizations and social systems from a communication perspective. The curriculum addresses issues concerned with interpersonal, relational and technologically mediated communication systems essential to modern, networked organizations and societies. Its graduates will acquire advanced-level expertise in communication theory, research, and applications that will improve processes and enhance outcomes within and across diverse social systems. The degree prepares students for higher-level positions in communication professions and for advanced degree programs (e.g., Ph.D. programs).

Admission Requirements: Applicants should have a minimum 3.0 GPA in the undergraduate major and a minimum of 3.0 over the last 60 hours of undergraduate work.

Master's Degree Requirements: The degree requires 36 credit hours with a minimum of 27 credit hours taken in communication. Students will be required to complete 9 hours of core requirements, and 27 hours of electives, 9 of which can be taken outside of the department with the approval of the graduate advisor. Students can also take up to 6 internship or independent study credit hours. Students on the thesis track can take up to 6 thesis credit hours.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Comparative Biomedical Sciences

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Comparative Biomedical Sciences	Y		Y				

GRADUATE FACULTY

Directors of Graduate Programs:

K. M. Meurs, Box 8401, 919/513-6213, kmmeurs@ncsu.edu, College of Veterinary Medicine S. L. Jones, Box 8401, 919/513-7722, sam_jones@ncsu.edu, College of Veterinary Medicine

Named Professors: L. Jaykus, H. B. Patisaul, A. A. Tsiatis; *Named Distinguished Professors:* R. R. Anholt; *Professors:* K. B. Adler, G. W. Almond, K. L. Anderson, P. Arasu, H. J. Barnes,

R. E. Baynes, A. J. Birkenheuer, A. T. Blikslager, J. C. Bonner, R. J. Borski, M. Breen, E. B. Breitschwerdt, T. T. Brown, D. K. Carver, M. T. Correa, P. J. Cray, J. M. Cullen, M. G. Davidson, G. A. Dean, T. C. DeFrancesco, D. C. Dorman, O. J. Fletcher, F. J. Fuller, J. E. Gadsby, B. C. Gilger, J. R. Godwin, J. L. Gookin, C. B. Grindem, J. S. Guy, B. Hammerberg, E. M. Hardie, C. A. Harms, E. C. Hawkins, C. L. Hemenway, J. M. Hinshaw, J. M. Horowitz, S. L. Jones, B. W. Keene, S. W. Kullman, D. X. Lascelles, S. M. Laster, J. M. Law, J. F. Levine, G. A. Lewbart, D. P. Lunn, K. G. Mathews, M. C. McGahan, K. M. Meurs, P. E. Mozdziak, K. R. Munana, S. C. Nelson, N. J. Olby, T. J. Olivry, M. G. Papich, J. A. Piedrahita, L. P. Posner, E. F. Rissman, S. C. Roe, P. L. Sannes, D. Shea, B. Sherry, W. J. Showers, J. E. Smallwood, R. C. Smart, G. W. Smith, M. K. Stoskopf, S. L. Vaden, D. P. Wages, D. W. Watson; Research Professors: A. R. Brody, S. Kennedy-Stoskopf; Clinical Professors: K. E. Linder, R. A. Mansmann, S. L. Marks, W. R. Redding, B. L. Sherman; Adjunct Professors: T. K. Archer, R. S. Balaban, A. E. Bogan, G. R. Burleson, N. J. Caplen, M. W. Dewhirst, K. L. Dreher, L. J. Helman, C. S. Lau, M. N. Martinez Pelsor, D. B. McGavern, R. B. Meeker, J. H. Shelhamer, R. M. Simpson, J. K. Taubenberger, D. W. Threadgill, L. E. Williams; *Emeritus Professors:* L. A. Degernes, H. A. Devine, L. N. Fleisher, R. B. Ford, M. L. Hauck, L. C. Hudson, M. G. Levy, D. H. Ley, D. J. Meuten, N. A. Monteiro-Riviere, W. M. Morrow, P. E. Orndorff, J. F. Roberts, M. C. Roberts, L. P. Tate, D. E. Thrall, M. B. Tompkins, W. Tompkins; *Emeritus Named* Distinguished Professors: J. E. Riviere; Emeritus Distinguished Professors: C. E. Atkins; Associate Professors: C. A. Adin, C. S. Bailey, L. B. Borst, B. A. Breuhaus, K. Cheng, P. Cowen, W. A. Gebreyes, T. Ghashghaei, I. M. Gimeno, B. Hansen, P. R. Hess, M. E. Jacob, M. D. Koci, C. Lanzas, K. F. Lunn, S. K. Lyle, C. L. Mariani, C. J. Mattingly, N. M. Nascone-Yoder, J. A. Neel, X. Peng, M. Rodriguez-Puebla, R. M. Schoenfeld, F. Scholle, M. L. Sikes, B. D. Slenning, L. A. Sombers, S. E. Suter, S. Thakur, S. Tonkonogy, J. A. Yoder; Research Associate Professors: R. G. Maggi; Adjunct Associate Professors: M. L. Alley, B. R. BERRIDGE, R. S. DeWoskin, D. Dixon, J. A. Dye, S. E. Fenton, A. J. Moeser, E. B. Neufeld, R. C. Sills; *Emeritus Associate Professors:* R. E. Fish, S. Y. Gardner, C. R. Swanson, M. D. Whitacre; Assistant Professors: B. S. Akpa, P. Bizikova, B. J. Callahan, E. Crisci, G. P. Cruse, C. M. Dekaney, J. R. Elfenbein, J. E. Fogle, D. M. Foster, L. M. Gonzalez, H. R. Hunt, T. E. Kaeser, A. A. Kedrowicz, A. J. Keung, C. Laplante, J. A. Luff, A. M. Lynch, G. Machado, K. Marsden, K. A. Meiklejohn, J. E. Meitzen, K. M. Messenger, S. K. Mishra, F. M. Mowat, C. C. Nestor, M. W. Nolan, O. A. Petritz, A. J. Planchart, A. San Miguel Delgadillo, L. V. Schnabel, M. K. Sheats, C. M. Theriot, L. C. Van Landeghem, L. A. Villamizar Martinez, H. D. Westermeyer, H. Yoshikawa; Research Assistant Professors: S. K. Nordone, B. A. Qurollo, R. Thomas; Emeritus Research Professors: M. J. Dykstra; Clinical Associate Professors: R. B. Baker, C. A. Fogle; Clinical Assistant Professors: D. B. Adin, N. S. Browne, M. L. Mastromauro, S. E. Musulin, H. Ru, A. M. Snyder, C. A. Stiles, D. A. Stowe, K. M. Tefft, A. Vigani; Visiting Assistant Professors: R. Linnehan; Adjunct Assistant Professors: A. E. Bogan, M. L. Bradley, W. C. Eward, S. E. Fenton, J. M. Giraudel, M. E. Gruen, R. M. Hanel, Y. Kim, M. R. Loomis, D. E. Malarkey, M. W. Wood; *Teaching Associate Professors:* M. P. Gerard; Teaching Assistant Professors: E. B. Bohorquez, S. E. Robertson

Course offerings and research topics currently include, but are not limited to: cell biology, genomics, infectious diseases, developmental biology, immunology, cardiology,

pharmacokinetics, oncology, toxicology, gastroenterology, neuroscience, reproductive physiology, biotechnology, microbiology, aquatic/ wildlife biology, biomedical engineering, endocrinology, molecular biology, pulmonary biology, epidemiology, population medicine, health systems monitoring, transplantation and radiology.

Admission Requirements: All applications are reviewed by the Graduate Studies Committee of the CBS Program, composed of faculty members representing each area of the graduate program and a graduate student representative. Scores from the GRE are required for admission by all applicants except for applicants with a DVM degree. Candidates who do not have a DVM degree must have a baccalaureate degree or advanced degree from a college or university recognized as standard by a regional or general accrediting agency. Students with a 3.0 (on a 4.0 scale) undergraduate or DVM curriculum with appropriate course background will be considered for admission.

Doctoral Degree Requirements: Credit hour requirements for the Ph.D. degree are determined by the graduate student's committee with approval of the Director of Graduate Programs and the Graduate School.

Student Financial Support: Research assistantships are awarded to qualified candidates on the competitive basis by the College. These are for 12-month periods, and stipends are competitive with those of other programs. These positions are funded by the grants of individual faculty members and the state appropriations to the College and departments.

Other Relevant Information: The program is organized as seven areas of concentration which include: cell biology, immunology, population medicine, infectious diseases, pathology, pharmacology, and neuroscience. These provide extensive interdisciplinary training and maintain a highly effective liaison with graduate programs in other colleges of the university, as well as those of nearby Duke University and the University of North Carolina at Chapel Hill.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Computational Engineering and Sciences (Minor Program)

GRADUATE FACULTY

Professor Yousry Azmy, Program Coordinator

The Computational Engineering and Sciences Program includes faculty from twelve departments in the College of Engineering and College of Sciences. Graduate students pursuing graduate study toward a master's or Ph.D. degree in one of the participating science or engineering departments may elect this program in place of the traditional minor. [Note that students wishing to earn a graduate degree in mathematics or computer science should reference these departments' sections of the Graduate Catalog for details on options available in computational mathematics and scientific computing.] To complete the program requirements, a student must

successfully complete a sequence of graduate-level applied mathematics and computer science courses and, if a research dissertation is required, utilize advanced computational techniques in the course of conducting the research.

The Computational Engineering and Sciences Program is designed to efficiently prepare graduate students to undertake research utilizing scientific computing by combining course work in applied mathematics and computer science in addition to course work in the traditional major. The program recognizes that the area of scientific pursuit, numerical simulation, has emerged as a new paradigm for scientific inquiry complementing theory and laboratory experiment. Typical areas of research include, but are not limited to, computational fluid dynamics, molecular dynamics, radiation transport, quantum chemistry and atmospheric modeling. Admission to the program is gained after enrollment in the Graduate School and the graduate program is underway. Program course requirements are selected from applied mathematics and computer science courses listed elsewhere in this Graduate Catalog. Typical courses that may be selected to satisfy this program's requirements include numerical analysis, numerical linear algebra for parallel architectures, stochastic simulation, computer operating systems, digital systems architecture, computer graphics, compiler construction, software engineering, and design and analysis of algorithms.

Computer Networking

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Computer Networking			Y				

GRADUATE FACULTY

Directors of Graduate Programs:

G. Rouskas, Box 8206, 919/515-3860, <u>rouskas@ncsu.edu</u>, Computer Science P. D. Franzon, Box 7911, 919/515-7351, <u>paulf@ncsu.edu</u>, Electrical and Computer Engineering

Named Professors: D. D. Stancil; Distinguished Professors: V. Misra, M. A. Vouk; Professors: G. T. Byrd, M. Chow, R. Dutta, D. Y. Eun, L. Lunardi, R. F. Mueller, A. Nilsson, O. Oralkan, H. G. Perros, D. S. Reeves, G. Rouskas, M. L. Sichitiu, M. P. Singh, W. J. Stewart, D. J. Thuente, H. J. Trussell, J. V. Veliadis, I. Viniotis, W. Wang; Research Professors: D. L. Lubkeman; Adjunct Professors: S. C. Ahalt, M. Devetsikiotis, P. Ning, I. Rhee; Associate Professors: M. Becchi, L. Cao, W. H. Enck, I. Guvenc, K. H. Harfoush, N. Lu, X. Shen, D. Vashaee; Research Associate Professors: W. Yu; Adjunct Associate Professors: T. Yu; Assistant Professors: J. J. Adams, M. Daniele, S. Lin, C. J. Parnin, S. Pavlidis, B. Reaves, M. Shahzad, W. Tang, C. Wong, T. Wu; Research Assistant Professors: J. Kim; Adjunct Assistant Professors: K. E. Boyer, B. Callaway, G. W. Howell, R. Mikail; Teaching Associate Professors: S. S. Heckman, D. B. Sturgill; Teaching Assistant Professors: M. Abbasi

The Master of Science in computer networking may be earned through the M.S. with thesis option or through the non-thesis option. Either option may be used as preparation for further graduate study or employment in industrial research, development or design environment, although students planning to continue on for a Ph.D. should discuss the option selected with their advisors.

The Master of Science in Computer Networking is also available as on online degree program. This degree has a non-thesis option, does not require on campus attendance, and may be used in preparation for further graduate student or employment in an industrial research, development or design environment. The program is available to USA residents and to United States military personnel serving overseas and it is offered online through Engineering OnLine.

Admission Requirements: Admissions criteria will adhere to those currently listed on the program website http://networking.ncsu.edu.

Master's Degree Requirements: Computer networking core courses constitute 9 of the 30 minimum credit hours. Students take 12 additional credit hours of computer networking courses from one of four currently defined technical concentration areas: network design, network hardware, network software, or networking services. The remaining 9 credit hours may be taken from an approved management concentration sequence, as additional courses in the computer networking technical concentration areas, or as 6 hours of thesis and 3 credit hours from the list of approved computer networking courses. At least 6 of the 30 credits must come from the 700 level, and non-letter graded courses such as individual studies courses may account for a maximum of 3 credit hours.

CORE COURSES

CSC(ECE) 570 Computer Networks CSC(ECE) 579 Introduction to Computer Performance Modeling

Select one of the following business courses: MBA 554 Project Management (Summer, Fall, Spring)

MBA 590 Special Topics: Management Foundations (Fall) MBA 590 Special Topics: Service Management (Spring)

TECHNICAL CONCENTRATION

CSC 501 Operating System Principles

CSC(ECE) 506 Architecture of Parallel Computers

CSC 510 Software Engineering

CSC 513 E-Commerce technology

CSC(MBA) 516 E-commerce Practicum

CSC 557 Multimedia Technology

CSC(ECE) 573 Internet Protocols

CSC(ECE) 574 Information Systems Security

CSC(ECE) 575 Introduction to Wireless Networking

CSC(ECE) 576 High Speed Networks

CSC 714 Real-Time Computer Systems

CSC 715 Concurrent Software System

CSC 716 Design of Secure and Reliable Systems

CSC 724 Advanced Distributive Systems

CSC 750 Service-Oriented Computing

CSC(ECE) 772 Survivable Networks

CSC(ECE) 773 Advanced Topics in Internet Protocols

CSC(ECE) 774 Network Security

CSC(ECE) 776 Performance Evaluation of Computer Networks

CSC(ECE) 775 Advanced Topics in Wireless Networks

CSC(ECE) 777 Telecommunications Network Design

CSC(ECE) 779 Advanced Computer Performance Modeling

CSC(ECE) 778 Optical Networks

ECE 514 Random Processes

ECE 520 Digital ASIC Design

ECE 521 Computer Design and Technology

ECE 523 Photonics and Optical Communications

ECE 546 VLSI System Design

ECE 733 Digital Electronics

ECE 761 Design Automation for VLSI

MANAGEMENT CONCENTRATION

MBA 503 Survey of Accounting

MBA 514 Technology, Competition and the Law

MBA 520 Managerial Finance

MBA 541 Supply Chain Relationships

MBA 542 Supply Chain Logistics

MBA 543 Planning and Control Systems

MBA 554 Project Management

MBA 576 Technology Evaluation and Commercialization Concepts

MBA 577 High Technology Entrepreneurship

MBA 590 Special Topics: Decision Support Systems

MBA 590 Special Topics: Business Process Analysis and Design MBA 590 Special Topics: Business Relationship Management

MBA 590 Special Topics: Consulting

MBA 590 Special Topics: Service Management

NCSU Graduate Catalog

Computer Science

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Computer Science	Y		Y		Y		

GRADUATE FACULTY

Director of Graduate Programs:

G. Rouskas, Box 8206, 919/515-3860, rouskas@ncsu.edu, Computer Science

Named Distinguished Professors: J. Doyle; Named Distinguished University Professors: M. Rappa; Distinguished Professors: J. C. Lester II, T. K. Miller, M. A. Vouk; Distinguished University Professors: D. L. Bitzer; Professors: T. M. Barnes, G. T. Byrd, R. Dutta, C. G. Healey, E. L. Kaltofen, H. Krim, G. Mahinthakumar, T. J. Menzies, R. F. Mueller, H. G. Perros, D. S. Reeves, E. Rotenberg, G. Rouskas, N. F. Samatova, C. D. Savage, M. L. Sichitiu, M. P. Singh, Y. Solihin, R. A. St. Amant, M. F. Stallmann, W. J. Stewart, D. J. Thuente, I. Viniotis, W. Wang, L. A. Williams; Research Professors: P. A. Dreher; Visiting Research Professors: F. Brglez; Adjunct Professors: S. C. Ahalt, A. I. Anton, M. Devetsikiotis, S. P. Iyer, G. Lazzi, P. Ning, I. Rhee, X. Wang, J. T. Whitted, R. M. Young; *Emeritus Professors*: W. Chou, E. W. Davis Jr, R. J. Fornaro, J. C. Glass, D. F. McAllister, C. Meyer, W. E. Snyder, A. L. Tharp; Associate Professors: D. R. Bahler, R. Y. Chirkova, A. G. Dean, W. H. Enck, V. W. Freeh, E. F. Gehringer, X. Gu, K. H. Harfoush, S. Heber, A. H. Jhala, E. R. Murphy-Hill, K. Ogan, D. L. Roberts, X. Shen, V. B. Sullivan, R. R. Vatsavai, B. A. Watson; Adjunct Associate Professors: X. Jiang, X. Ma, A. J. Rindos, J. N. Staddon, T. Xie, T. Yu; *Emeritus Associate Professors:* T. L. Honeycutt, J. S. Scroggs; Assistant Professors: M. Chi, G. Jin, A. Kapravelos, C. F. Lynch, C. Martens, C. J. Parnin, B. Reaves, A. Scafuro, M. Shahzad, K. T. Stolee, H. Tseng; Adjunct Assistant Professors: K. E. Boyer, G. W. Howell, M. D. Kowolenko, B. W. Mott, A. T. Rivers, J. P. Rowe, J. B. Slankas, D. R. Wright, Y. Xin; *Teaching Associate Professors:* S. S. Heckman, D. B. Sturgill; *Teaching Assistant Professors:* S. M. Balik, T. Battestilli, J. T. King, K. Oduor, J. Y. Schmidt; *Lecturers:* A. J. Rindos

The Department of Computer Science is one of the leading computer science departments in the United States. Twenty three of our faculty have received prestigious NSF CAREER development awards. Total research expenditures have quadrupled over the last several years. The graduate program has more than 700 students, of whom more than 200 are PhD students. The faculty has broad-ranging research strengths that include *Theory* (Algorithms, Theory of Computation); *Systems* (Computer Architectures and Operating Systems, Embedded and Real-Time Systems, Parallel and Distributed Systems, Scientific and High Performance Computing); *Artificial Intelligence* (Intelligent Agents, Data-Mining, Information and Knowledge Discovery, Engineering and Management; eCommerce Technologies; Information Visualization, Graphics and Human-Computer Interaction); *Networks* (Networking, Performance Evaluation, Sensor Networks, Protocols); *Security* (Software and Network Systems Security, Information Assurance, Privacy); *Software Engineering* (Requirements, Formal Methods, Reliability Engineering, Process and Methods, Programming Languages); and *Computer-Based Education*. Areas of strength in applied research include bioinformatics, scientific computation, e-commerce and data mining.

Admission Requirements: Minimum application requirements include an accredited Bachelor's degree with at least a B average and computer science and mathematics course work similar to an undergraduate Computer Science major. Applicants must submit scores for the GRE General Tests.

Master's Degree Requirements: The M.S. requires 31 graduate credits including at least one course from each of the core areas of Theory (CSC 505, 512, 565, 579, 580, and 707) and Systems (CSC 501, 506, 510, 520, 540, 562, and 570), and the successful defense of a thesis. The advisory committee may waive the thesis requirement for students planning to pursue the Ph.D. who pass the Ph.D. written preliminary examination and complete specified additional course work in lieu of thesis research. The Master of Computer Science (M.C.S.) is a professional degree granted upon successful completion of 31 hours of course work, including three core courses with at least one from each of the two core areas. The M.C.S. degree is offered as an on-campus program or as a Distance Education program.

Doctoral Degree Requirements: Ph.D. students normally complete 72 semester hours of post-baccalaureate course and research work. They must also complete at least two courses from each of the two core areas noted above with at least a 3.5 GPA, and two 700-level CSC courses, individualized in-depth written and oral preliminary examinations, and a public defense of their dissertation describing substantial, original, and independent scholarly work.

Student Financial Support: During the 2015-2016 academic year, at least 180 students were awarded teaching or research assistantships. The Department also offers numerous supplemental fellowships, and has approximately 10 students on full-time fellowships. In addition, students have many opportunities to work at leading industry and government research labs and high-tech employers, both locally and throughout the United States.

Other Relevant Information: Graduates at all levels are highly respected and aggressively recruited. They enjoy successful careers locally and throughout the country and the world. Many Master's degree graduates begin or continue careers in advanced networking or software development in the Research Triangle Park and on the West Coast, at companies such as IBM, Microsoft, Google, SAS, Intel, Netapp, Amazon, Facebook, and Cisco. Many recent Ph.D.s have positions of technical leadership in well-known large companies and prominent research laboratories, including Google, Microsoft Research, and IBM Research Labs, or have obtained tenure-track faculty positions at Research I universities.

Click on **Graduate Courses** for current course information.

NCSU Graduate Catalog

Creative Writing

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA	
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GRADUATE FACULTY

The Department of English offers a two-year studio/academic program in fiction or poetry leading to the Master of Fine Arts degree. The program provides an opportunity for students of superior and demonstrated ability in imaginative writing to develop their skills and critical judgment through the practice of writing and the study of literature. The aim of the program is to prepare talented students for careers in writing. Degree candidates are expected to produce a book-length work of literary value and publishable quality.

Admission Requirements: Overall GPA of 3.0 or higher; applicants should submit GRE scores (general aptitude and analytical writing); one official transcript of all undergraduate and graduate work; three letters of recommendation; and two writing samples, one creative, one critical. Creative sample: for fiction, two short stories, or for a novel, three chapters (or one chapter and a short story) totaling 25-40 pages; for poetry, 12 complete poems. Critical sample: no more than 15 pages of writing demonstrating your ability to succeed in graduate-level literature classes, a required part of the MFA curriculum.

Requirements for the MFA in Creative Writing: Candidates for the MFA degree must complete a total of 36 credits. Eighteen of these are taken in the area of writing specialization. These include workshop courses (12 credits) and thesis (6 credits). The remaining credits are taken in literature (6 credits) and elective areas (12 credits, including 6 credit hours of teaching preparation for those on a composition teaching assistantship).

In their final semester, students must pass a comprehensive written examination on writing craft, based on a book list selected jointly by the student and the faculty. The final thesis must be a book-length manuscript in the student's field of interest. In fiction, an approximate 200 pages are expected; in poetry, 60 pages. See program website for specific requirements by concentration.

Student Financial Support: All students admitted to the MFA program are eligible for <u>teaching assistantships</u>. TAs in the MFA train to teach undergraduate composition courses, and a few selected creative writing classes.

Other Relevant Information: Application deadline is February 1. Students are admitted for the fall semester only.

The English department has a long tradition of academic and literary excellence, including its heritage of writers from Guy Owen to Lee Smith. The department is home to editors of several contemporary journals and presses, including *Free Verse: A Journal of Contemporary Poetry & Poetics, Hyperrhiz: New Media Cultures*, and *ScribblingWomen.org*. The strength of NCSU in the sciences offers students the opportunity to do creative work that engages with issues of technology and its effect on individuals and institutions that are not typically addressed in fine arts programs.

Through its Owen/Walters Readings Series, the department sponsors readings and visits by distinguished poets, fiction and non-fiction writers.

Click on **Graduate Courses** for current course information.

NCSU Graduate Catalog

Crop and Soil Sciences

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Crop Science	Y		Y		Y		
Soil Science	Y		Y		Y		

GRADUATE FACULTY

Directors of Graduate Programs:

D. C. Bowman, Box 7620, 919/515-2085, dan_bowman@ncsu.edu, Crop and Soil Sciences T. J. Smyth, Box 7620, 919/515-2838, jot_smyth@ncsu.edu, Crop and Soil Sciences

Named Professors: J. M. Alonso, R. E. Dewey, L. R. Fisher, D. L. Hesterberg, T. W. Rufty; Named Distinguished Professors: J. T. Brake, M. J. Vepraskas; Distinguished University Professors: M. M. Goodman, W. F. Thompson; Professors: A. Amoozegar, D. C. Bowman, S. W. Broome, R. J. Cooper, D. A. Crouse, C. R. Crozier, E. J. Dunphy, K. L. Edmisten, G. E. Fernandez, C. H. Haigler, J. L. Havlin, R. W. Heiniger, J. L. Heitman, M. Hyman, F. Isik, T. G. Isleib, D. L. Jordan, R. S. Lewis, R. A. McLaughlin, G. G. McRae, G. L. Miller, M. Mullen, J. P. Murphy, D. L. Osmond, R. P. Patterson, C. H. Peacock, R. Qu, R. J. Richardson, R. C. Rufty, W. Shi, T. J. Smyth, H. T. Stalker, R. Wells, T. R. Wentworth, E. B. Wilson, F. H. Yelverton; USDA Professors: G. Brown-Guedira, K. O. Burkey, T. E. Carter, A. J. Franzluebbers, J. B. Holland, D. P. Livingston, D. S. Marshall, R. M. Mian, R. W. Zobel; Adjunct Professors: K. D. Getsinger, R. Liebl, T. R. Sinclair, R. W. Zobel; *Emeritus Named Professors:* W. K. Collins, G. F. Peedin, W. D. Smith, J. C. Wynne, A. C. York; *Emeritus Professors*: D. T. Bowman, A. H. Bruneau, D. K. Cassel, H. D. Coble, W. A. Cope, F. T. Corbin, D. A. Emery, J. T. Green, J. D. Gregory, H. D. Gross, D. W. Israel, G. L. Jones, H. J. Kleiss, J. A. Lee, W. M. Lewis, H. M. Linker, R. C. Long, J. Luginbuhl, J. P. Mueller, W. P. Robarge, J. F. Spears, G. A. Sullivan, M. G. Wagger, J. B. Weber, A. K. Weissinger, P. R. Weisz, A. D. Worsham; *Emeritus Named* Distinguished Professors: J. W. Gilliam, R. W. Skaggs, E. A. Wernsman; Emeritus Distinguished Professors: S. W. Buol; Associate Professors: J. D. Burton, O. W. Duckworth, W. J. Everman, A. K. Graves, V. Kuraparthy, C. Maltecca, S. R. Milla-Lewis, S. C. Reberg-Horton, M. S. Schroeder-Moreno, L. J. Unruh Snyder, J. G. White; Research Associate Professors: D. G. Seth Carley; USDA Associate Professors: M. D. Krakowsky; Emeritus USDA Professors: J. W. Burton, D. L. Thompson; Adjunct Associate Professors: M. D.

Netherland, M. L. Polizzotto; *Emeritus Associate Professors:* D. A. Danehower, R. D. Keys, J. P. Lilly, G. C. Naderman; *Assistant Professors:* M. S. Castillo, R. L. Cook, T. W. Gannon, T. G. Gardner, A. M. Johnson, R. G. Leon Gonzalez, A. R. Post, M. C. Vann; *USDA Assistant Professors:* A. M. Hulse-Kemp, A. M. Locke, E. Taliercio; *Adjunct Assistant Professors:* D. H. Hardy, R. O. Maguire, L. M. Miranda; *Extension Associate Professors:* G. D. Collins; *Teaching Associate Professors:* C. V. Jordan; *Lecturers:* J. T. Walker

Graduate students in soil science may specialize in the following subdisciplines: soil physics, soil chemistry; soil microbiology and biochemistry; soil fertility and plant nutrition; soil genesis, morphology and classification; soil and water management and conservation; soil mineralogy.

Admissions Requirements: Graduate students accepted in soil science must have a Bachelor's or Master's degree with a major in soil science or a closely related field and with a strong background in the biological and physical sciences.

Master of Science Degree Requirements: Requirements include a minimum of 30 semester hours of course work, including at least one credit, but not more than two credit hours, of seminar (SSC 601) and a minimum of two, but not more than six, credit hours of research (SSC 693 or SSC 695), successful completion of a research problem, submittal of a written thesis that documents the research, a final oral examination and presentation of a non-credit exit seminar.

Master of Soil Science Degree Requirements (non-thesis distance education

program): Requirements include a minimum of 36 semester credit hours of graduate work with a minimum of four, but not more than six, credit hours of a Master's project (SCC 620). One credit hour of seminar (SSC 601) and a final oral examination is also required.

Master of Soil Science Degree Requirements (non-thesis campus based

program): Requirements include a minimum of 36 semester credit hours of graduate work with a minimum of four, but not more than six, credit hours of Special Problems (SSC 620) and a final oral examination. One credit hour of seminar (SSC 601) is required and a maximum of two credit hours is acceptable.

Doctoral Degree Requirements: Ph.D. candidates must demonstrate the ability to undertake original research with minimal supervision and write a dissertation reporting the results of this research. There are no definite course requirements for the Ph.D. degree; however, a minimum of 72 graduate credit hours is required beyond the Bachelor's degree. The Plan of Graduate Work must contain at least one credit hour of seminar (SSC 801) and at least two credit hours of research (SSC 893 or SSC 895). The candidate must also pass a preliminary examination (written and oral components) and a final oral examination. A non-credit exit seminar is required. A minor is optional, although one-third of the credits should usually be in courses outside of the department.

Student Financial Support: The department has a number of assistantships available to students who have demonstrated a high level of academic aptitude or potential. All of the graduate

assistantships are half time.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Design

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
<u>Design</u>	Y						

GRADUATE FACULTY

Director of Graduate Programs:

S. Cho, Box 7701, scho3@ncsu.edu, Architecture

Professors: R. F. Abrams, T. M. Barrie, E. H. Bressler, C. D. Cox, M. E. Deming, D. Gonzales Crisp, D. B. Hill, H. Holljes, S. B. Joines, T. Liu, R. C. Moore, W. Place, A. R. Rice, J. M. Scearce; Professors of the Practice: M. E. Purnell; Emeritus Professors: M. J. Davis, H. Khachatoorian, P. Tesar; Associate Professors: H. S. Armstrong, K. M. Boone, T. W. Buie, S. Cho, J. Coll-Barreu, P. J. Fitzgerald, R. A. Flinchum, A. A. Fox, C. Gill, D. K. Gulling, J. Hu, B. W. Laffitte, F. H. Magallanes, P. E. Morgado, S. G. Queen, K. J. Schaffer; Research Associate Professors: P. K. Baran, N. G. Cosco; Assistant Professors: B. Erdim, D. A. Ham, D. K. Littlejohn, C. Mouat Croxatto, C. Pasalar, M. O. Peterson, K. A. Umstead; Research Assistant Professors: T. R. Rider

The mission of the Doctor of Philosophy in Design Program in the College of Design at NC State University is to improve human condition through design research and scholarship. This mission is built in equal parts on the recognition of a fertile common ground among the design disciplines and on the need for specificity and depth within them. The Ph.D. Program therefore values a broad range of research interests that aim to improve the human condition through design.

The aim of the Ph.D. in design is to prepare students holding previous degrees in a design discipline to conduct research in the areas of: design for health and well-being; design for learning; design for sustainability; design and technology; design and the urban context; design methods; and design history and criticism.

Admission Requirements: Two official academic transcripts; three letters of reference; GRE scores; TOEFL scores (for international students); residency statement (U.S. residents only); College of Design personal data form; statement of research intent; and portfolio.

Doctoral Degree Requirements: The program of study requires a minimum of 54 credit hours of graduate work beyond the Master's degree, and of these credit hours, 18 will be independent research and dissertation credit with the remaining 36 hours of course work being completed in the Ph.D. program. In addition, there are three (3) 1-credit colloquia.

Student Financial Support: Teaching and research assistantships are available to doctoral students, and in addition, those students receiving some form of research assistantship may also receive tuition remission. Assistantships are awarded on the recommendation of the program director in consultation with the faculty.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Ecology (Minor Program)

Rebecca Irwin, Coordinator NCSU Box 7617 Phone: 919.513.7553

Fax: 919.515.5327

E-mail: reirwin@ncsu.edu

Ecology is the science concerned with the interactions of organisms with each other and with their environment. It is an integrative science through which one gains an understanding of biological and physical interrelationships and predicts the consequences of altering one or several components. Students in a number of basic and applied curricula may elect to minor in ecology at the M. S. and Ph.D. levels. The minor provides an opportunity for a broad overview of the science of ecology.

The ecology minor is an interdepartmental program drawing faculty from the Departments of Applied Ecology, Biological Sciences, Crop and Soil Science, Entomology and Plant Pathology, Forestry and Environmental Resources, Marine, Earth and Atmospheric Sciences, Parks, Recreation and Tourism Management, Plant and Microbial Biology, and Statistics. The Director of the Biology Graduate Program (DGP) administers the Ecology minor.

Requirements for a Minor in Ecology

A graduate student's advisory committee must include one member who conducts research in Ecology. This committee member must be from a department other than that of the chairman of the student's committee and should be chosen in consultation with the Ecology minor DGP.

M.S. minor: A minimum of 9 credit hours of approved Ecology graduate courses, including AEC 502 and AEC 503. The remaining courses can be chosen in consultation with the Ecology minor DGP and must be outside the student's major discipline.

Ph.D. minor: A minimum of 12 credit hours of approved Ecology graduate courses, including AEC 502 and AEC 503. The remaining courses can be chosen in consultation with the Ecology minor DGP and must be outside the student's major discipline. No courses used to meet the Ecology minor requirements for the M.S. degree may be used to meet the Ph.D. minor requirements.

Economics

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Agricultural and Resource Economics			Y				
Economics	Y		Y		Y		

GRADUATE FACULTY

Directors of Graduate Programs:

S. G. Allen, Box 8114, 919/515-5584, steve_allen@ncsu.edu, Business Management X. Zheng, Box 8109, 919/515-4543, xiaoyong_zheng@ncsu.edu, Agriculture and Resource Economics

Named Professors: A. B. Brown, D. A. Dickey; Named Distinguished Professors: B. K. Goodwin, J. M. Nason, W. N. Thurman, M. L. Walden; *Professors:* S. G. Allen, J. C. Beghin, R. L. Clark, L. A. Craig, P. L. Fackler, A. R. Hall, D. N. Hyman, C. R. Knoeber, D. K. Pearce, N. E. Piggott, R. M. Rejesus, M. A. Renkow, J. J. Seater, E. O. Sills, L. O. Taylor, T. Vukina, M. D. Walker, K. D. Zering, X. Zheng; Adjunct Professors: T. P. Holmes; Emeritus Professors: G. A. Benson, R. H. Bernhard, G. A. Carlson, L. E. Danielson, J. E. Easley, E. W. Erickson, E. A. Estes, D. Fisher, D. J. Flath, T. J. Grennes, D. M. Holthausen, T. Johnson, C. E. Joyner, H. J. Kleiss, J. S. Lapp, M. C. Marra, C. L. Moore, R. B. Palmquist, C. D. Safley, R. A. Schrimper, W. J. Wessels; Emeritus Distinguished University Professors: V. K. Smith; Associate Professors: R. G. Hammond, I. T. Kandilov, M. B. McElroy, K. Mitchell, M. S. Morrill, T. S. Morrill, A. W. Oltmans, D. Pelletier, N. J. Traum, R. H. von Haefen; Adjunct Associate Professors: C. M. Newmark; *Emeritus Associate Professors:* D. S. Ball, A. E. Headen, E. A. McDermed; Assistant Professors: K. A. Boys, Z. S. Brown, U. Dur, G. Fiori, R. P. Guiteras, I. Kalnina, Z. Li; Adjunct Assistant Professors: B. J. Hubbell, D. J. MacNair; Teaching Professors: P. Cwik, T. C. Morant, B. L. Puryear; *Teaching Assistant Professors:* J. Treme, C. E. Youngblood; Lecturers: B. L. Puryear

The graduate program in economics is a joint program of the Department of Agricultural and Resource Economics in the College of Agriculture and Life Sciences and the Department of Economics in the Poole College of Management. Emphasis is placed on economic theory and quantitative economic analysis and their application to economic problems. Master's students can choose between the terminal master's track and the PhD-prep track. In both tracks, they may further tailor their experience by choosing to concentrate in one or multiple of the four fields: financial/macro econometrics; international trade and development; natural resource and environmental economics and economic policy. Students can also choose between engaging in a research project culminating in a thesis (the Master of Science in economics degree) and simply pursuing a coursework only option (the Master of Economics degree). The major fields of specialization for doctoral students are: agricultural economics, development economics, econometrics, environmental/resource economics, industrial organization, international economics, labor economics, macro-monetary economics and microeconomic theory and experimental/behavioral economics.

Admission Requirements: Minimum background for admission for Master's study includes intermediate microeconomics and intermediate macroeconomics, calculus I and calculus II, and one semester of statistics (econometrics courses included). For doctoral study, prerequisites are intermediate microeconomics, intermediate macroeconomics, calculus I-III, linear algebra, and a course in mathematical statistics. GRE scores are required for doctoral applicants only.

Master's Degree Requirements: Both the Master of Science in economics and the Master of Economics degrees require core courses in microeconomics, macroeconomics and econometrics. Each degree also carries additional elective requirements. The M.S. degree requires a thesis. Both degrees offer two tracks: a terminal master's track and a PhD-prep track. Specific course requirements for both the Master of Science and the Master of Economics can be found on the Graduate Program in Economics website. Both Master's degrees require a total of 30 credit hours. Accelerated Bachelor's/Master's degree programs are available for non-thesis options.

Doctoral Degree Requirements: The Ph.D. program requires a minimum of 72 hours and at least six semesters of work beyond the Bachelor's degree. Students must pass written comprehensive examinations in microeconomics and macroeconomics. Course requirements include two semesters of econometrics and six field courses.

Student Financial Support: Research and teaching assistantships are available and are awarded competitively on a merit basis. These assistantships go to Ph.D. students only; there is no financial support for Master's students. Prospective doctoral students who wish to be considered for assistantships should apply for fall admission by January 1.

Other Relevant Information: Graduate students on financial support are provided office space or study carrels. Other students may be assigned study carrels if available. All students have access to the economics graduate student computer lab.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Education [General Courses]

GRADUATE COURSES

ED(AEE) 501 Foundations of Agricultural and Extension Education

ED(AEE) 530 Priority Management in Agricultural and Extension Education

ED(AEE) 641 Practicum in Agricultural and Extension Education

ED(AEE) 735 Effective Teaching in Agriculture and Life Sciences

ED(AEE) 841 Practicum in Agricultural and Extension Education

Educational Leadership, Policy, and Human Development

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Training and Development						Y	

GRADUATE FACULTY

Directors of Graduate Programs:

L. D. Fusarelli, Box 7801, 919/513-0507, lance_fusarelli@ncsu.edu, Educational Leadership, Policy and Human Development

M. E. Bartlett, Box 7801, mebartle@ncsu.edu, Educational Leadership, Policy and Human Development

S. Ting, Box 7801, 919/515-6362, <u>ting@ncsu.edu</u>, Educational Leadership, Policy and Human Development

Professors: D. Akroyd, T. W. Cawthon, A. J. Jaeger, P. A. Pasque, S. R. Porter, A. N. Rockenbach; Professors of the Practice: R. R. Garcia, R. G. Templin; Adjunct Professors: L. Gonzalez-Sullivan, B. A. Olson, R. S. Ralls; Emeritus Named Professors: C. E. Kasworm; Emeritus Professors: G. B. Vaughan; Associate Professors: S. J. Barcinas, J. E. Bartlett, T. A. Bowles, J. G. Gayles, B. S. Mehlenbacher, T. V. Young; Adjunct Associate Professors: S. C. Faircloth; Assistant Professors: L. R. Bass, C. D. Hoggan; Adjunct Assistant Professors: K. A. Boham, L. M. Chapman, D. K. Deardorff, K. G. Dixon, K. L. Ender, J. E. Fleming, B. J. Frye, E. V. Griffin, C. O. Grochowski, M. B. Jackowski, W. D. McInnis, W. D. Milheim, A. B. Orders, R. R. Parker, D. L. Reichard, M. E. Rittling, S. C. Scott, J. W. Wescott, S. Williams, C. L. Zelna; Teaching Professors: D. D. Chapman; Teaching Assistant Professors: M. E. Bartlett, W. D. Milheim, F. P. Riddick, C. L. Warren, C. C. Williams

Information coming soon.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Electrical and Computer Engineering

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Computer Engineering	Y		Y				
Electric Power Systems Engineering			Y				
Electrical Engineering	Y		Y				

GRADUATE FACULTY

D. D. Stancil, Department Head

Director of Graduate Programs:

P. D. Franzon, Box 7911, 919/515-7351, paulf@ncsu.edu, Electrical and Computer Engineering

Named Professors: S. A. Bedair, I. Husain, D. D. Stancil, M. B. Steer; Named Distinguished Professors: J. Doyle, J. Narayan, R. J. Trew; Distinguished Professors: P. D. Franzon, N. A. Masnari, T. K. Miller, V. Misra, H. T. Nagle, M. A. Vouk; *Distinguished University Professors:* D. E. Aspnes, B. J. Baliga, D. L. Bitzer; *Professors:* M. E. Baran, S. Bhattacharya, G. T. Byrd, M. Chow, H. Dai, W. R. Davis, W. L. Ditto, A. Duel-Hallen, M. J. Escuti, D. Y. Eun, J. J. Grainger, E. Grant, B. L. Hughes, K. W. Kim, R. M. Kolbas, H. Krim, L. Lunardi, R. F. Mueller, J. F. Muth, A. Nilsson, O. Oralkan, M. C. Ozturk, H. G. Perros, D. S. Reeves, E. Rotenberg, G. Rouskas, M. L. Sichitiu, Y. Solihin, M. F. Stallmann, J. K. Townsend, H. J. Trussell, J. V. Veliadis, I. Viniotis, W. Wang, F. Wu, H. Zhou; Research Professors: D. C. Hopkins, D. L. Lubkeman, T. M. Paskova; *Professors of the Practice:* L. W. White; *Adjunct Professors:* M. Devetsikiotis, W. C. Holton, Q. HUANG, G. J. Iafrate, G. Lazzi, T. M. Paskova, I. Rhee, J. T. Whitted; *Emeritus Named Professors:* J. R. Hauser; *Emeritus Professors:* W. E. Alexander, T. H. Glisson, M. A. Littlejohn, D. F. McAllister, C. M. Osburn, S. A. Rajala, W. E. Snyder; Associate Professors: S. T. Alexander, D. Z. Baron, M. Becchi, A. Y. Bozkurt, L. Cao, A. Chakrabortty, R. Y. Chirkova, A. G. Dean, B. A. Floyd, E. F. Gehringer, I. Guvenc, K. H. Harfoush, D. S. Lalush, E. Lobaton, N. Lu, S. M. Lukic, D. Ricketts, X. Shen, J. Tuck, D. Vashaee, G. M. Walker, C. M. Williams; Research Associate Professors: W. Yu; Adjunct Associate Professors: A. J. Rindos, T. Xie, M. Yadav; Emeritus Associate Professors: G. F. Bland, D. H. Covington, W. C. Peterson; Assistant Professors: J. J. Adams, M. Daniele, C. M.

Gallippi, M. W. Kudenov, S. Lin, S. Pavlidis, B. Reaves, M. Shahzad, W. Tang, H. Tseng, C. Wong, T. Wu; *Research Assistant Professors:* B. Kia, J. Kim, B. Lee; *Adjunct Assistant Professors:* B. Callaway, B. Kia, R. Mikail; *Teaching Professors:* S. D. Jackson; *Teaching Associate Professors:* L. J. Bottomley, B. Evans, R. A. Gupta, H. Orun, M. Yadav, D. G. Yu; *Teaching Assistant Professors:* M. Abbasi, S. E. Hollar; *Lecturers:* A. J. Rindos

Graduate programs in Electrical and Computer Engineering provide a variety of excellent education and research opportunities for outstanding students from around the world. Our Master's Degree Program offers a variety of options for specialization including a Master of Science in either Electrical Engineering, Computer Engineering, or Networking (all are available via distance learning or on-campus enrollment). Also, a strong Ph.D. program is available for students who wish to complete their education in the field of Electrical Engineering or Computer Engineering.

The Master of Science in Electric Power Systems Engineering (MS-EPSE) is an innovative new program which will give students a thorough understanding of the tools, methods, and practice of electric power engineering. It is both focused and practical in its orientation, with the goal of providing an education that is directly applicable to a career in industry. The MS-EPSE is an accelerated program that can be completed in ten months. The degree is suitable for a new or recent graduate, as well as experienced professionals who want to receive the necessary retraining to change careers.

Admissions Requirements: Admission to the M.S. program requires a B.S. in electrical engineering, computer engineering or computer science, and an overall undergraduate GPA of at least 3.25. The minimum acceptable TOEFL score for admission to the M.S. program is 90 (minimum 18 in each area, with minimum of 19 on Speaking). The GRE is required for all programs of study. Admission is further limited by available room in the elected program of study. Meeting the above minimum requirements alone does not guarantee admission.

Admission to the MS-EPSE program requires students to have a bachelor's degree from an accredited college or university in electrical engineering with an overall GPA of at least 3.0. Students who do not have a bachelor's degree from an accredited college or university in electrical engineering must satisfy:

- 1. Completion of the following ECE courses (or electrical engineering courses equivalent to ECE 200, 211, 220, 331, and 435.
- 2. Applicants must have also completed the following courses or equivalent courses: three semesters of calculus, one semester of probability/statistics, two semesters of physics, and one semester of chemistry.

GRE scores within the last four years of the date of anticipated admission. Guideline for minimal GRE percentile scores are 70 percentile verbal, 90 percentile quantitative, and 50 percentile analytical or writing. GRE scores for students who are graduates from NCSU may be waived. They also might be waived for graduates from US ABET accredited programs with good GPAs.

All international applicants must submit TOEFL scores. The TOEFL must have been taken within two years of the date of anticipated admission. On the TOEFL iBT, students must have a minimum of 18 on each section of the test with a minimum total of 90. Scores on previous versions of the TOEFL are considered with the same qualitative standard. On the IELTS, we require a minimum score of 6.5 in each section. This requirement also applies to US citizens whose principal language of instruction has not been English (for example, most applicants from Puerto Rico and the Virgin Islands).

TOEFL - institution code 5496; department code 66 GRE - institution code 5496; department code 1203

Admission to the Ph.D. program requires a B.S. or M.S. in electrical engineering, computer engineering or computer science with an overall GPA of at least 3.50. The minimum acceptable TOEFL score for admission to the Ph.D. program is 90 (minimum 18 in each area, with minimum of 19 on Speaking). The GRE is required for all programs of study but might be waived for NCSU graduates or graduates from other US ABET accredited schools with good GPAs. Admission is further limited by available room in the elected program of study, and meeting the minimum requirements as given above does not guarantee admission.

Master's Degree Requirements: Thirty (30) credit hours; a thesis is optional. Students must have at least 21 hours of ECE courses that cover at least three specialty areas and have at least three credit hours of advanced-level (700-level) ECE courses. Students electing the Option B non-thesis option must meet core course requirements; have ECE courses that cover at least three specialty areas' and and have at least three credit hours of 700-level ECE courses.

The Master's degrees in CPE are now offered online through <u>Engineering OnLine</u>. Applications to these MS on-line programs are through the ECE Department and all students must comply with ECE program requirements.

The MS-EPSE program requires 30 credit hours of graduate coursework. Twenty-seven credits of courses include four core electric power engineering courses; two interdisciplinary courses on power electronics, data communications, cyber security and environmental issues associated with electric power systems; professional skill straining on project management, communication skills, and the business aspects of electric power utilities, and solid hands-on experience through laboratories and a capstone project. This program provides a one-to-one interaction with industry partners. The MS-EPSE program starts with an introductory course in the summer, five courses in the fall, and concludes with four courses in the spring preparing students in ten months for careers.

Doctoral Degree Requirements: Approximately 54 credit hours are required beyond the M.S. degree or 72 credit hours beyond the B.S. degree. For those with an NCSU MS degree in our department, no additional courses are required. For those with an NCSU MS degree in another department, 6 credit hours are required in our department. For those with a non NCSU MS degree, 12 credit hours of coursework are required. For those with only a Bachelors degree 30 credit hours of coursework are required.

The department wishes to evaluate a Ph.D. student's research potential as quickly as possible. Consequently, all Ph.D. students are required to pass a qualifying review before the end of their third semester of study. This review is based on the student's academic performance to date and the results of a project with one of their committee members. Results are presented to the committee in both written and oral form. Based on this review, the committee will decide if the student may continue in the Ph.D. program.

Student Financial Support: The department offers financial support to qualified students in the form of teaching assistantships, research assistantships, fellowships and tuition remission.

Other Relevant Information: To further promote integration of concepts and provide hands on experience, the MS-EPSE program has a capstone project. The project will be a realistic smart grid application and the students will be asked to prototype a method or device and implement it on the 1 MW Green Hub available at the FREEDM Systems Center for smart grid applications.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Elementary Education

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Elementary Education			Y			Y	

GRADUATE FACULTY

Directors of Graduate Programs:

- J. K. Lee, Box 7801, 919/513-0126, <u>jklee@ncsu.edu</u>, Teacher Education and Learning Sciences J. T. DeCuir-Gunby, Box 7801, 919/513-7669, <u>jessica_decuir@ncsu.edu</u>, Teacher Education and Learning Sciences
- S. J. Carrier, Box 7801, 919/513-2808, <u>sjcarrie@ncsu.edu</u>, Teacher Education and Learning Sciences

Professors: P. L. Marshall, P. Sztajn; *Associate Professors:* S. J. Carrier, K. A. Keene, J. Minogue, M. M. Thomson, T. A. Walkowiak, A. M. Wiseman; *Assistant Professors:* C. C. Lee, J. N. Pearson, J. Wilson; *Teaching Associate Professors:* V. N. Faulkner, A. D. Harrington; *Teaching Assistant Professors:* M. J. Jeffries, J. G. Koch

The Elementary Education program in the Department of Teacher Education and Learning Sciences (TELS) offers a Doctor of Philosophy (Ph.D.) degree in Elementary Mathematics or

Science Education. This program prepares scholars who are committed to improving learning opportunities for elementary aged children by engaging in coursework, research studies, and practical experiences focusing on children's and teachers' learning in mathematics or science.

The Elementary Education program in the TELS department offers a Master of Education (M.Ed.) degree in Elementary Education with a concentration in either mathematics or science education. The Master's program prepares teacher leaders who possess strong specialized content knowledge in mathematics or science and a deep understanding of how elementary students learn. The program, designed for those who already hold a current teaching license, is especially tailored to provide candidates with leadership and application skills to transfer their knowledge to their work with elementary school teachers and students.

The program is considered Distance Education (DE) and offered off campus at school sites in the region to take advantage of reduced DE tuition rates.

For more information please see https://ced.ncsu.edu/programs/elementary-education-master/

The coursework for the mathematics and science concentrations are approved by the North Carolina State Board of Education. Therefore, graduates of the M.Ed. program are eligible to receive the elementary mathematics or elementary science specialist add-on to their North Carolina K-6 teaching license from the Department of Public Instruction. The College of Education is accredited by the Council for the Accreditation of Educator Preparation (CAEP).

Admission Requirements:

Doctoral Elementary Teacher Education and Learning Sciences program: Application requirements include a 500-800 word personal statement describing professional and research goals, 3 reference letters in support of the applicant's potential for doctoral studies, transcripts with a 3.0 GPA, GRE scores, and resume.

Elementary Education Master's program: Application requirements include a 500-800 word statement describing professional goals, transcripts and reference letters, and a teaching license. The Graduate School requires a 3.0 GPA in an undergraduate program. The best qualified applicants will be accepted up to the limited number of spaces available for new students.

For the M.S. degree, a minimum of 33 hours is required. The M.S. degree requires a thesis and final oral examination approved by the graduate committee. It is the responsibility of MS students to secure an advisor in advance to supervise their thesis research.

Click on **Graduate Courses** for current course information.

NCSU Graduate Catalog

Engineering - (Off-campus program only)

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Engineering					Y		

GRADUATE FACULTY

Director of Graduate Programs:

M. A. Bourham, Box 7909, 919/515-7662, bourham@ncsu.edu, Nuclear Engineering

Named Professors: S. A. Khan, G. N. Parsons; Named Distinguished Professors: C. C. Koch; Named Distinguished University Professors: T. J. Hodgson; Distinguished Professors: J. J. Cuomo, P. D. Franzon, J. Genzer, M. A. Vouk; Distinguished University Professors: M. A. Barlaz; Professors: M. A. Bourham, M. Chow, A. Duel-Hallen, Y. Fathi, R. D. Gould, C. S. Grant, J. M. Nau, H. G. Perros, S. Ranjithan, D. S. Reeves, P. I. Ro, G. Rouskas, R. O. Scattergood, L. M. Silverberg, M. P. Singh, J. K. Townsend, H. J. Trussell, I. Viniotis; Emeritus Named Professors: C. F. Zorowski; Emeritus Professors: T. Johnson, M. L. Leming, C. M. Osburn, C. F. Zorowski; Emeritus Distinguished Professors: D. W. Johnston; Associate Professors: T. L. Honeycutt, E. Sanii; Adjunct Assistant Professors: L. D. Krute

The Master of Engineering distance education program serves the needs of students whose schedule or location does not allow for on-campus study, working professionals wishing to obtain an advanced degree, or those who are seeking to change fields within engineering. Students design the plan of study which best meets their career or educational goals.

Admission Requirements: Applicants must have an undergraduate degree in engineering or closely related field with a minimum overall GPA of 3.0. Individuals who do not meet these criteria may need to complete prerequisites before being admitted to the program. GRE scores are not required. International applicants may be required to take the TOEFL or IELTS exam. Up to 12 hours of credit may be transferred into the program from other universities or non-degree studies, with approval.

Plan of Study: The Master of Engineering is a 30-credit-hour, interdisciplinary program. Students must identify an area of concentration from which they will complete three to six classes. The remaining hours may be taken from any other discipline, or from related departments (Science, Business, etc.) with advisor approval.

Areas of Concentration:

Aerospace Engineering Chemical Engineering Computer Engineering Computer Science Electrical Engineering Engineering Management
Industrial Engineering
Mechanical Engineering
Materials Science and Engineering
Nuclear Engineering

NCSU Graduate Catalog

English

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Creative Writing							Y
English				Y			
Technical Communication			Y				

GRADUATE FACULTY

L. R. Severin, Department Head

Directors of Graduate Programs:

A. M. Penrose, Box 8105, 919/515-4107, penrose@ncsu.edu, English

B. M. Boggs, Box 8105, bmboggs@ncsu.edu, English

H. Ding, Box 8105, hding@ncsu.edu, English

Named Distinguished University Professors: W. A. Wolfram; Distinguished Professors: A. H. Harrison, J. M. Nfah-Abbenyi; Distinguished University Professors: C. M. Anson; Professors: W. W. Barnhardt, M. P. Carter, M. G. Gordon, J. M. Grimwood, H. D. Kellner, J. J. Kessel, D. L. Laux, L. S. May, W. J. Miller, M. E. Orr, A. M. Penrose, S. M. Setzer, L. R. Severin, A. F. Stein, J. Swarts, E. R. Thomas, J. F. Thompson, J. N. Wall, C. A. Warren; Professors of the Practice: J. C. McCorkle; Emeritus Professors: B. J. Baines, J. Balaban, G. W. Barrax, P. E. Blank, J. W. Clark, A. M. Davis-Gardner, J. D. Durant, C. Gross, L. T. Holley, W. J. Jordan, J. J. Kessel, A. S. Knowles, L. H. MacKethan, W. E. Meyers, C. R. Miller, C. A. Prioli, J. J. Small, L. Smith, J. J. Smoot, M. H. Thuente, R. V. Young; Associate Professors: A. Baker, B. A. Bennett, B. M. Boggs, A. Bolonyai, H. J. Burgess, C. J. Crosbie, H. Ding, R. M. Dodsworth, M. K. Dudley, C. J. Fedukovich, P. C. Fyfe, O. Gelley, S. M. Katz, R. C. Kochersberger, J. I. Mielke, J. D. Morillo, J. S. Mulholland, D. A. Orgeron, J. L. Reaser, D. M. Rieder, T. L. Stinson, R. A. Walsh; Adjunct Associate Professors: S. L. Joffe; Emeritus Associate Professors: D. H. Covington, R. S. Dicks, M. F. King, R. C. Kochersberger, C. E. Moore, D. J. Reavis, H. C. West; Assistant Professors: Z. C. Beare, R. W. Browdy, F. D. Cason, E. C. Corral, A. R. Johnston, J.

A. Nolan, S. L. Pigg, M. Simon, D. M. Walls; Assistant Professors of the Practice: J. H. Millar; Teaching Associate Professors: B. Blackley; Teaching Assistant Professors: J. R. Knowles

The Master of Arts program offers four concentrations representing distinctive dimensions of the field of English: Literature, Linguistics, Rhetoric and Composition, and Film Studies. United by a common emphasis on research and critical thinking, the four options offer diverse perspectives and methods for exploring culture and language in myriad forms and circumstances. The degree can serve either as a complete course of study or as the first phase of study toward a doctoral degree at another institution.

Admission Requirements: Overall GPA of 3.0 or higher. Applicants should submit GRE scores (general aptitude and analytical writing); one official transcript of all undergraduate and graduate work; three letters of recommendation; a personal statement; and a writing sample.

Requirements for MA in English: Students select one of four concentrations: Literature, Linguistics, Rhetoric and Composition, or Film Studies. Students choose from a <u>broad array of courses</u> in these disciplinary areas, including an increasing number of boundary-crossing <u>special topics</u> courses. Each concentration requires 33 credit hours, including 15-18 hours of coursework in the area of specialization, 12-15 hours distributed among literary study and open electives, and 3 credit hours of independent capstone research. See <u>program website</u> for specific requirements by concentration.

Student Financial Support: <u>Teaching assistantships</u> are available for a limited number of promising students. Applications for assistantships are due February 1 and are only available for those entering in the fall semester.

The English department has a long tradition of academic and literary excellence, including its heritage of writers from Guy Owen to Lee Smith. The department is home to editors of several contemporary journals and presses, including *Free Verse: A Journal of Contemporary Poetry & Poetics, Hyperrhiz: New Media Cultures*, and *ScribblingWomen.org*. Situated in a university known for its innovative research in engineering and the sciences, the English department's multidisciplinary program offers students the opportunity to do creative and academic work that engages with issues of technology and its interactions with individuals and institutions.

Click on **Graduate Courses** for current course information.

NCSU Graduate Catalog

Entomology and Plant Pathology

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Entomology	Y		Y				
Plant Pathology	Y		Y		Y		

GRADUATE FACULTY

E. L. Davis, Department Head

Directors of Graduate Programs:

C. E. Sorenson, Box 7613, 919/515-8427, clyde_sorenson@ncsu.edu, Entomology and Plant Pathology

D. F. Ritchie, Box 7616, 919/515-6809, <u>david_ritchie@ncsu.edu</u>, Entomology and Plant Pathology

Named Professors: D. M. Bird, R. R. Dunn, T. A. Melton, J. B. Ristaino, H. D. Shew, B. M. Wiegmann; Named Distinguished Professors: R. S. Boston, R. L. Brandenburg, M. E. Daub, E. L. Davis, R. A. Dean, F. L. Gould, L. K. Hanley-Bowdoin, G. G. Kennedy, S. Lommel, R. Roe, C. J. Schal, J. Silverman; *Professors:* D. Buchwalter, W. G. Buhler, H. J. Burrack, I. Carbone, M. A. Cubeta, S. Franzen, H. M. Hassan, C. L. Hemenway, S. Hu, F. J. Louws, J. R. Meyer, C. H. Opperman, C. H. Peacock, D. F. Ritchie, R. C. Rufty, M. J. Scott, C. E. Sorenson, D. R. Tarpy, J. Tzeng, J. F. Walgenbach, D. W. Watson, A. E. Whitfield; *Research Professors:* A. C. Cohen; USDA Professors: C. Cowger, J. B. Holland, D. S. Marshall; Visiting Professors: C. S. Hodges; Adjunct Professors: J. J. Arends, Y. J. Cardoza, B. K. Clarke, G. Gordh, N. M. Haddad, N. M. Hamon, D. A. Herbert, A. A. Perez de Leon, M. R. Schwarz, S. R. Shafer, D. E. Sonenshine, L. P. Tredway; *Emeritus Named Professors:* C. S. Apperson, N. T. Powell, J. W. VanDuyn; Emeritus Professors: C. W. Averre, J. S. Bacheler, J. R. Baker, D. F. Bateman, D. M. Benson, M. K. Beute, J. R. Bradley, W. M. Brooks, W. V. Campbell, E. B. Cowling, L. L. Deitz, M. H. Farrier, W. M. Hagler, F. P. Hain, J. D. Harper, J. S. Huang, R. K. Jones, L. T. Lucas, C. E. Main, R. D. Milholland, H. B. Moore, J. W. Moyer, H. H. Neunzig, J. F. Roberts, R. L. Robertson, P. B. Shoemaker, K. A. Sorensen, P. S. Southern, R. E. Stinner, T. B. Sutton, H. H. Triantaphyllou, C. G. VanDyke, J. C. Wells, C. G. Wright; *Emeritus Named Distinguished* Professors: G. A. Payne; Associate Professors: S. D. Frank, J. P. Kerns, M. D. Lorenzen, P. Ojiambo, D. B. Orr, D. D. Reisig, D. Rotenberg; Research Associate Professors: R. M. Jetton; USDA Associate Professors: P. J. Balint-Kurti, R. G. Upchurch; Emeritus USDA Professors: H. W. Spurr; Emeritus Research Associate Professors: S. R. Koenning; Adjunct Associate Professors: S. Bloem, K. R. Lakin, W. O. McMillan, C. Nalepa, R. A. Sequeira, J. W. Smith; Emeritus Associate Professors: R. C. Hillmann; Assistant Professors: Z. S. Brown, L. M. Quesada, M. H. Reiskind, L. D. Thiessen; Research Assistant Professors: B. B. Shew; Adjunct Assistant Professors: T. L. Harp, K. T. Kreitlow, M. M. Lopez-Uribe, T. L. Sit, K. A. Suiter, W. Ye; Extension Associate Professors: M. G. Waldvogel; Extension Assistant Professors: S. M. Villani

Plant pathology is committed to solving plant disease problems with research that focuses on plant-pathogen interactions at the genomic, cellular, organismal, and ecological levels. Approaches include disease management, epidemiology, molecular biology and host-parasite interactions. Focus areas are bacteriology, bioinfomatics, functional genomics, mycology, nematology, virology, soil-borne pathogens and mechanisms of pathogenesis, and host resistance.

Admission Requirements: The general application procedures of the Graduate School noted at the beginning of this section are followed. Applicants are required to submit GRE results. A detailed statement of applicant interests and goals in plant pathology is most useful to the admissions committee.

Master's Degree Requirements: There is a core curriculum of a minimum of 12 credit hours that includes PP 501, PP 502, PP 506, PP 707, and PP 601. The core should be supplemented with a minimum of 18 credit hours in courses at the 500 or higher level, which support the focus of the study. Students serve as teaching assistants for one course.

Doctoral Degree Requirements: Students entering the Ph.D. degree program are expected to take the core curriculum outlined for the Master's degree or have had the equivalent at another institution. Additionally, Ph.D. students must include a departmental-approved ethics course, two credits PP 801, and at least two other 700-level Plant Pathology courses. Ph.D. students serve as teaching assistants for two courses.

Student Financial Support: A limited number of half-time assistantships are available on a competitive basis. Benefits include in-state tuition, out-of-state tuition and health insurance as covered under the Graduate School's Graduate Student Support Plan. Applicants are considered for assistantship support at time of application. Special supplements to assistantships are available on a competitive basis for outstanding students. Also, many faculty programs have research grant-funded or training grant-funded assistantships.

Other Relevant Information: Fully equipped and staffed laboratories for research are available in addition to greenhouse facilities and environmental growth chambers in the phytotron. Special facilities for experimental work on diseases under field conditions are available at 16 University-related locations throughout the state. Genomics facilities, microcomputers, library, mycological herbarium, digital imaging/graphics equipment programs, and an interdepartmental electron microscopy center are additional features available for the department.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Environmental Assessment

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Environmental Assessment					Y		

GRADUATE FACULTY

Directors of Graduate Programs:

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T. H. Shear, Box 8008, 919/515-7794, <u>ted_shear@ncsu.edu</u>, Forestry and Environmental Resources

Professors: D. D. Aday, H. V. Daniels, B. Goldfarb, E. G. Nichols, M. N. Peterson, D. Shea; USDI Professors: T. J. Kwak; Associate Professors: G. B. Blank, L. V. Kochtcheeva; Emeritus Associate Professors: S. T. Warren; Extension Professors: M. A. Megalos; Teaching Assistant Professors: W. A. Kallestad, C. E. LePrevost; Lecturers: S. E. Graham, L. R. Taylor

The Master of Environmental Assessment Degree is an interdisciplinary program focused on understanding the adverse impacts that pollutants and naturally occurring substances pose on human health and the environment. The program builds upon NC State University's expertise in environmental issues and problem solving. The program is designed as a completely online degree. This allows professionals the flexibility to complete their degree while still working. In addition, individuals can boost their credentials through our (non degree) certificate program. Through the program, students combine multiple fields of study to tackle complex environmental problems.

Admission Requirements: Admissions to the Master of Environmental Assessment degree is based on the evaluation of several criteria and credentials including educational and professional experience, potential for graduate work, and availability and interest of faculty advisors. Final admission to the degree is granted by the Graduate School upon recommendation of the Environmental Assessment Director of Graduate Programs. See the program website for admissions deadlines. Students are only admitted for fall and spring semesters.

Graduate Record Exam (GRE) results are NOT required for admittance to the program. In general, applicants should hold a B.A. or B.S. degree in a natural resources, environmental science and management, engineering, or related field and have an undergraduate GPA of 3.0 or higher. Experience in environmental management, consulting or regulatory administration will be considered for students with a Bachelors degree in an unrelated field. For those without the necessary background courses in undergraduate science, or mathematics, some additional coursework may need to be completed prior to the start of the graduate student program.

Master's Degree Requirements: The Master of Environmental Assessment Program requires students to complete 30 credit hours of graduate coursework. Twenty-two hours will be in required courses with the remaining eight hours selected from the list of elective courses or equivalent.

Once enrolled, each student must submit a plan of work outlining the 30 credit hours which will be included in the students program. Students in the Master of Environmental Assessment program are self-supported. Self-supported students may take up to 12 credit hours of course work per semester. However, students who are employed full time may find it advantageous to enroll in one or two courses per semester.

Other Relevant Information: The Masters of Environmental Assessment requires completion of a professional project. Students will develop a project in his/her area of interest in collaboration with an appropriate organization, agency or business under the direction of their faculty advisor. The Professional Project, is an applied "capstone" experience that is a "paper study" which might include such tasks as assembling existing data and performing a risk assessment. Students will enroll in EA 665 as part of their project research. Upon completion of the research or project work, each student presents their project (both process and results) in a public departmental seminar and turns in a paper summarizing the relevant research of the professional project.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Environmental Remote Sensing and Image Analysis (Minor Program)

Dr. Siamak Khorram NCSU Box 7106 Phone: 919.515.2868

Email: khorram@ncsu.edu

This graduate minor provides graduate students the opportunity to develop a recognized academic credential in remote sensing and image analysis in conjunction with their major program of graduate study. A minimum of 12 credit hours, 6 credit hours of required courses and 6 credit hours of elective courses, is required to complete the minor.

Prerequisite: Graduate status (non-Option B).

Course Requirements: Students must complete a total of 12 credit hours (6 hours from required courses and 6 hours from electives). See the Remote Sensing Minor website for more details.

Other Requirements: A GIST faculty member must be on the student's graduate committee. A list of currently approved faculty members can be provided to students upon request. If no graduate committee is required by the student's program, the student must obtain approval of his

or her minor program. Students enrolled in Option B Masters programs are not eligible to declare a minor. Certificate coursework and Minor coursework must be completely independent

Fiber and Polymer Science

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Fiber and Polymer Science	Y						
Textile Technology Management	Y						

GRADUATE FACULTY

Director of Graduate Programs:

S. Michielsen, Box 8301, 919/515-1414, <u>Stephen Michielsen@ncsu.edu</u>, Textile Engineering, Chemistry and Science

Named Professors: R. L. Barker, S. Fang, H. S. Freeman, D. Hinks, S. A. Khan, R. E. King, W. Oxenham, A. E. Tonelli; Named Distinguished Professors: B. Pourdeyhimi; Named Distinguished University Professors: A. B. Godfrey, R. B. Handfield, T. J. Hodgson, B. M. Novak, M. Rappa; *Distinguished Professors:* J. Genzer, R. J. Spontak; *Professors:* H. Ade, C. M. Balik, K. R. Beck, C. C. Bozarth, C. L. Bumgardner, T. G. Clapp, A. M. El-Shafei, P. S. Fedkiw, R. E. Fornes, T. K. Ghosh, R. E. Gorga, C. B. Gorman, P. J. Hauser, S. M. Hudson, C. L. Istook, W. J. Jasper, J. A. Joines, M. W. King, T. A. Lamar, K. K. Leonas, T. J. Little, M. G. McCord, S. Michielsen, M. M. Moore, M. Pasquinelli, J. P. Rust, A. M. Seyam, R. Shamey, R. A. Venditti, A. J. Williams, J. R. Wilson, X. Zhang; Adjunct Professors: E. G. Loboa-Polefka, K. Mathur, O. J. Rojas; *Emeritus Named Professors:* S. K. Batra, S. P. Hersh, H. B. Hopfenberg, C. B. Smith, M. W. Suh, S. C. Winchester, C. F. Zorowski; *Emeritus Professors:* R. A. Barnhardt, R. A. Donaldson, A. H. El-Shiekh, R. E. Fornes, P. L. Grady, B. S. Gupta, D. M. Holthausen, G. N. Mock, H. G. Olf, N. C. Powell, S. T. Purrington, W. C. Stuckey, M. H. Theil, C. Tomasino, C. F. Zorowski; *Emeritus Distinguished Professors:* M. H. Mohamed; Associate Professors: K. E. Annett-Hitchcock, P. Banks-Lee, K. A. Barletta, P. D. Bradford, E. A. DenHartog, H. H. Hergeth, G. L. Hodge, J. S. Jur, R. Kotek, W. E. Krause, J. P. Lavelle, L. A. Lucia, L. Pal, L. L. Parrillo-Chapman, L. F. Rothenberg, S. I. Salmon, Y. Xu; *Research* Associate Professors: D. P. Griffis; Adjunct Associate Professors: J. P. Casani, G. M. Garland, S. B. Moore; *Emeritus Associate Professors:* S. N. Chapman, J. K. McCreery, G. W. Smith; Assistant Professors: E. N. Ford, W. Gao, S. Lim, D. R. Matthews, J. A. Porterfield, E. Shim, M. Suh, N. R. Vinueza Benitez, A. J. West, J. F. Woodbridge; Research Assistant Professors: N. Anantharamaiah, G. M. Garland, B. Maze, B. Yeom; *Teaching Professors:* H. Hamouda, H. L. Nuttle: Lecturers: G. M. Devine

Fiber and Polymer Science is a multidisciplinary program bringing together the disciplines of mathematics, chemistry and physics and the application of engineering principles for the development of independent scholars versed in all aspects of fiber and polymer materials science. Thus, fiber and polymer science is concerned with the formation of and the mechanical, physical and chemical properties of polymeric materials, fibers produced from them, fiber assemblies in one-, two- and three-dimensional forms, and fiber reinforced composites, as well as the utilization thereof.

Admission Requirements: Students majoring in the physical sciences, engineering, mathematics, textiles and having a Master's degree with at least a 3.15 GPA will normally qualify for admission. For exceptionally qualified students, the Master's degree requirement may be waived, and the student can be admitted directly into the Ph.D. program.

Doctoral Degree Requirements: Credit-hour requirements for the Doctor of Philosophy degree are 72. (Up to 18 hours from an M.S. may be applied against the 72 provided they align well with the FPS program.) Students are admitted to candidacy for the Ph.D. degree after passing a prescribed group of courses, completing a scholarly critique of existing knowledge in the field of specialization, and orally defending a research proposal. They must also demonstrate proficiency in English technical writing.

Student Financial Support: Financial aid in the form of Graduate Research Assistantships, Teaching Assistantships, or other assistantships and fellowships is available to a limited number of students.

COURSE OFFERINGS (Extensive use may be made of graduate course offerings in other colleges on campus when developing the minor field.)

Click on Graduate Courses for current Fiber and Polymer Science course information.

OTHER GENERAL COURSES

TC 704 Fiber Formation--Theory and Practice
TC(CH,MSE) 762 Physical Chemistry of High Polymers--Bulk Properties
TC 791 Special Topics in Textile Science
TMS 500 Fiber and Polymer Microscopy
TMS 761 Mechanical and Rheological Properties of Fibrous Material
TMS 762 Physical Properties of Fiber Forming Polymers, Fibers and Fibrous Structures
TMS(MSE) 763 Characterization of Structure of Fiber Forming Polymers

COURSES IN AREAS OF SPECIALIZATION

Polymer Chemistry and Synthesis

TC 530 The Chemistry of Textile Auxiliaries TC(MSE) 561 Organic Chemistry of Polymers TC 720 Chemistry of Dyes and Color TC 721 Dye Synthesis Laboratory

Polymer Physics and Physical Chemistry

TC 704 Fiber Formation--Theory and Practice
TC 705 Theory of Dyeing
TC(CH,MSE) 762 Physical Chemistry of High Polymers--Bulk Properties

TC(CHE) 769 Polymers, Surfactants and Colloidal Materials

TC(CH,MSE) 772 Physical Chemistry of High Polymers--Solution Properties

TC(CHE) 779 Diffusion in Polymers

TC 792 Special Topics in Fiber Science

TMS 500 Fiber and Polymer Microscopy

Mechanics of Textile Materials and Processes

FPS(TT) 781 Mechanics of Twisted Structures

FPS(TT) 782 Mechanics of Fabric Structures

TE 565 Textile Composites

TT 500 Understanding the Textile Complex

TT 503 Materials, Polymers, and Fibers used in Nonwovens

TT 504 Introduction to Nonwovens Processes and Products

TT 505 Advanced Nonwovens Processing

TT 506 Bonding Principles in Nonwovens

TT 507 Nonwoven Characterization Methods

TT 508 Nonwoven Product Development

TT 520 Yarn Processing Dynamics

TT(TE,TMS) 521 Filament Yarn Production Processing and Properties

TT 549 Warp Knit Engineering and Structural Design

TT 550 Production Mechanics and Properties of Woven Fabrics

TT 551 Advance Woven Fabric Design & Structure

TT 552 Formation, Structure and Assembly of Medical Textile Products

TT 570 Textile Digital Design and Technology

TT 571 Professional Practices in Textile Design and Technology

TT 581 Technical Textiles

TT 591 Special Studies in Textile Technology

TT(FPS) 720 Yarn Production Properties: Advanced Topics

NCSU Graduate Catalog

Financial Mathematics

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Financial Mathematics					Y		

GRADUATE FACULTY

Directors of Graduate Programs:

S. G. Allen, Box 8114, 919/515-5584, <u>steve_allen@ncsu.edu</u>, Business Management T. Pang, Box 8205, 919/513-2110, <u>tpang@ncsu.edu</u>, Mathematics

Named Professors: D. A. Dickey; Professors: P. L. Fackler, S. K. Ghosh, K. Ito, N. G. Medhin, J. J. Seater, T. Vukina, J. R. Wilson; Emeritus Professors: R. H. Bernhard, P. Bloomfield; Associate Professors: M. J. Kang, T. Pang, D. Pelletier, C. E. Smith; Adjunct Associate

Professors: R. W. Ellson; Emeritus Associate Professors: J. S. Scroggs; Adjunct Assistant Professors: J. D. Hauenstein; Teaching Professors: B. L. Puryear; Lecturers: B. L. Puryear

The Departments of Mathematics, Agricultural and Resource Economics, Economics, Industrial and Systems Engineering, and Statistics offer a program leading to the degree of Master of Financial Mathematics. After completing the core requirements, students choose electives to suit their individual needs and interests.

Admissions Requirements: Applicants for admission should have an undergraduate degree that would preferably include courses in advanced calculus, modern algebra, and linear algebra.

Master of Financial Mathematics Requirements: In addition to course requirements (six core courses and four electives), the Master of Financial Mathematics degree requires completion of a three-credit internship or research project.

Student Financial Support: Some funding is available through a limited number of fellowships. Consideration for the support is automatic. There are no teaching assistantships or research assistantships for this Professional Science Masters.

REQUIRED CORE COURSES

ECG 528 Asset Pricing
ISE 711 Capital Investment Economic Analysis
ST 501 Statistical Theory I
MA 547 Financial Mathematics
FIM 548 Monte Carlo Methods for Financial Mathematics
ST 502 Statistical Theory II
ECG 766 Computational Methods in Economics and Finance

GRADUATE COURSES

MBA 521 Advanced Corporate Finance

MBA 522 Portfolio and Capital Market Theory

MBA 524 Equity Valuation

MBA 526 International Finance

MBA 527 Corporate Risk Management

MBA 529 New Firm Financing

ECG 716 Topics in Environmental and Resource Economics

ECG 749 Monetary Aspects Of International Trade

ECG(ST) 751 Econometrics

ECG(ST) 752 Topics in Econometrics

ECG 784 Advanced Macroeconomics

ISE 709 Dynamic Programming

ISE 712 Bayesian Decision Analysis for Engineers and Managers

MA(ST) 747 Probability and Stochastic Processes II

MA(ST) 748 Stochastic Differential Equations

MA 584 Numerical Solution of Partial Differential Equations-Finite Difference Methods

MA 591 Financial Risk Analysis

ST 730 Applied Time Series Analysis

ST 782 Time Series Analysis: Time Domain

ST 783 Time Series Analysis: Frequency Domain

ST 810 Advanced Topics in Statistics

Fisheries, Wildlife, and Conservation Biology

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Fisheries, Wildlife, and Conservation Biology	Y		Y		Y		

GRADUATE FACULTY

Directors of Graduate Programs:

- C. E. Moorman, Box 8008, chris_moorman@ncsu.edu, Forestry and Environmental Resources D. D. Aday, Box 7617, derek_aday@ncsu.edu, Zoology
- J. F. Levine, Box 8208, 919/513-6397, <u>jflevine@ncsu.edu</u>, Marine, Earth and Atmospheric Sciences
- M. K. Stoskopf, Box 8401, 919/513-6279, <u>michael_stoskopf@ncsu.edu</u>, College of Veterinary Medicine
- R. E. Irwin, Box 7617, reirwin@ncsu.edu, Zoology
- T. H. Shear, Box 8008, 919/515-7794, ted_shear@ncsu.edu, Forestry and Environmental Resources

Named Professors: W. G. Cope, R. R. Dunn; Professors: D. D. Aday, R. J. Borski, J. A. Buckel, M. T. Correa, F. W. Cubbage, H. V. Daniels, C. S. DePerno, D. B. Eggleston, J. R. Godwin, K. Gross, C. A. Harms, G. R. Hess, J. M. Hinshaw, C. A. Layman, J. F. Levine, K. M. Meurs, C. E. Moorman, S. C. Nelson, M. N. Peterson, J. A. Rice, R. J. Richardson, A. H. Ross, R. M. Scheller, C. E. Sorenson, M. K. Stoskopf; Research Professors: S. Kennedy-Stoskopf; USDI Professors: J. A. Collazo, T. J. Kwak, T. R. Simons; Adjunct Professors: J. G. Boreman, N. M. Haddad, J. E. Hightower, L. S. Mills, F. S. Scharf; Emeritus Professors: P. T. Bromley, B. J. Copeland, L. A. Degernes, P. D. Doerr, R. A. Lancia, R. L. Noble, K. H. Pollock, R. A. Powell; Associate Professors: M. V. Katti, R. B. Langerhans, T. H. Shear; Research Associate Professors: C. B. Cooper, R. W. Kays; Adjunct Associate Professors: W. G. Dorgeloh, C. A. Harper; Assistant Professors: T. M. Harrison, L. R. Larson, J. K. Pacifici, O. A. Petritz, B. J. Reading, B. W. Taylor; Research Assistant Professors: J. R. Fischer, M. B. Reiskind; Adjunct Assistant Professors: T. R. Black, E. F. Christiansen, D. T. Cobb, K. Delk, M. J. Eaton, R. J. Heise, C. J. Kendall, J. C. Kilgo, R. W. Laney, M. R. Loomis, L. J. Minter, J. A. Morris, A. J. Terando; Teaching Associate Professors: L. B. Pacifici; Lecturers: W. G. Dorgeloh

The degrees are offered through the Fisheries, Wildlife, and Conservation Biology program, an intercollegiate program administered by the Colleges of Natural Resources, Agriculture and Life Sciences, and Veterinary Medicine. Students are affiliated with the department of their major professor. The degrees emphasize habitat assessment, population biology, human dimensions,

environmental policy, animal health, and sustainable management of fish and wildlife species.

Admissions Requirements: Application for admission is made directly to the Fisheries, Wildlife, and Conservation Biology program. Minimum requirements include an undergraduate grade point average of 3.0 in an appropriate biological discipline and completion of the Graduate Record Examination (GRE). Admission is competitive and is contingent on the willingness of a member of the faculty to serve as the major professor. Exceptions to minimum requirements may be made for students with special backgrounds.

Master's Degree Requirements: The M.S. degree program requires a minimum of 30 credit hours, including 1-2 hours of seminar and no more than six hours of research. A research-based thesis is required, as is a minor (usually 9-10 hours). The Master of Fisheries, Wildlife, and Conservation Biology degree requires a minimum of 36 credits, including 4-6 hours of special problems and 1-2 hours of seminars, and a professional paper is required. For either degree, further requirements may be imposed by the advisory committee and/or department.

Doctoral Degree Requirements: The Ph.D. program requires 36 to 54 credits of course work beyond the Master's degree, including two seminars and an ethics course, and a dissertation. Exceptionally well-prepared students may petition to have their degree objective changed to Ph.D. before completing the Master's degree.

Student Financial Support: Graduate research and teaching assistantships are offered for qualified students through participating departments. Commitments for assistantships are normally made at the time of admission to graduate study.

Other Relevant Information: Research near campus is facilitated by excellent field, laboratory and computer resources. Off-campus research is conducted at the Pamlico Aquaculture Field Laboratory, research and extension centers in eastern and western NC, The Center for Marine Sciences and Technology in Morehead City, Bull Neck Swamp, Hill Forest, and at facilities of state and federal agencies and private organizations. For additional information, see the Fisheries, Wildlife, and Conservation Biology graduate web page: http://cnr.ncsu.edu/fer/grad/future/.

Click on Graduate Courses for current course information.

COURSES FROM ASSOCIATED DEPARTMENTS

BIO 561 Conservation Biology

FW 511 Human Dimension of Wildlife

FW 544 Mammalogy

FW 553 Principles of Wildlife Science

FW 560 International Wildlife Management and Conservation

FW 565 African Ecology and Conservation

FW 602/802 Seminar in Fisheries and Wildlife

FW 720 Epidemiology of Wildlife Diseases

FW 730 Ethics in Fisheries and Wildlife Sciences

FW 801 Issues in Fisheries and Wildlife Sciences Doctoral Seminar

ST 506 Sampling Animal Populations

ZO 501 Ornithology ZO 542 Herpetology ZO 726 Quantitative Fisheries Management

NCSU Graduate Catalog

Food Safety (Minor Program)

GRADUATE FACULTY

William Neal Reynolds Professor Lee-Ann Jaykus, Director

Email: leeann_jaykus@ncsu.edu

The primary objective of the Food Safety minor is to prepare science professionals with the depth and breadth of training necessary to understand and to control food safety challenges. The minor is directed in the Department of Food, Bioprocessing and Nutrition Sciences with participation by other departments in the Colleges of Agriculture and Life Sciences and Veterinary Medicine. However, it is open to all students having a science background that includes the disciplines of microbiology, biochemistry and molecular biology, and statistics. It is highly desirable that formal course training in food microbiology and/or preservation be part of each student's academic program, either before or concurrent with courses in the minor. Graduate students earning the minor are required to complete all 10 credits from the core courses listed below.

CORE COURSES

FSA 520 Pre-harvest Food Safety FSA (FS) 530 Post-harvest Food Safety FSA (FS) 540 Food Safety and Public Health FSA (FS) 580 Professional Development and Ethics in Food Safety

Food, Bioprocessing, and Nutrition Sciences

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Food Science	Y		Y		Y		

GRADUATE FACULTY

Director of Graduate Programs:

J. C. Allen, Box 7624, 919/513-2257, jon_allen@ncsu.edu, Food, Bioprocessing, and Nutrition Sciences

Named Professors: M. A. Drake, L. Jaykus, S. A. Khan; Named Distinguished Professors: E. A. Foegeding; Distinguished Professors: M. Lila; Professors: J. C. Allen, K. E. Anderson, S. L. Ash, P. A. Curtis, M. G. Ferruzzi, S. A. Hale, H. M. Hassan, S. Kathariou, T. C. Lanier, D. K. Larick, K. P. Sandeep, J. D. Sheppard; Research Professors: J. Simunovic; USDA Professors: F. Breidt, V. D. Truong; Adjunct Professors: P. M. Coronel, C. R. Daubert, J. P. Davis, B. E. Farkas, A. Kilara, R. C. Theuer; *Emeritus Professors:* L. W. Aurand, H. R. Ball, L. C. Boyd, R. E. Carawan, D. E. Carroll, G. L. Catignani, D. P. Green, M. E. Gregory, A. P. Hansen, V. A. Jones, C. J. Lackey, J. L. Oblinger, D. H. Pilkington, J. E. Rushing, S. J. Schwartz, B. W. Sheldon, L. G. Turner, D. R. Ward; *Emeritus Named Distinguished Professors:* K. R. Swartzel; Emeritus Named Distinguished University Professors: T. R. Klaenhammer; Emeritus Distinguished Professors: H. E. Swaisgood; Associate Professors: R. Barrangou, B. J. Chapman, P. Cowen, L. S. Goodell, D. J. Hanson, G. K. Harris, C. D. Kay, S. Komarnytsky; USDA Associate Professors: L. L. Dean; Emeritus USDA Professors: H. P. Fleming, R. F. McFeeters, T. H. Sanders, W. M. Walter; Adjunct Associate Professors: R. R. Sharma-Shivappa, O. T. Toomer; Assistant Professors: A. Fogleman, E. Gutierrez Rodriguez, C. D. Stevenson; USDA Assistant Professors: S. D. Johanningsmeier, I. M. Perez Diaz, O. T. Toomer; Adjunct Assistant Professors: A. Amezquita, S. Sang

The department's professional activities include teaching, research, and extension functions. The program provides an educational, research, and informational center in food science for North Carolina and the nation. The department also houses two research centers, the Southeast Dairy Foods Research Center and the Center for Advanced Processing and Packaging Studies. Course offerings and research opportunities are available in the following areas: chemistry-biochemistry, engineering, microbiology, nutrition and processing technology. The strategic directions of the faculty and staff are in the areas of: food safety and foodborne disease prevention; food manufacturing and entrepreneurship; instructional innovation and effectiveness; and, foods for health and well-being.

Admissions Requirements: To be admitted, a student should be a graduate of an accredited program in food science or the equivalent. Graduates of other majors can be admitted but will have additional course requirements. The best qualified applicants will be accepted up to the number of spaces that are available for new students. We only recommend admission to the M.S. or Ph.D. degree if a member of our research faculty is willing to advise the student's research. Applications from qualified candidates will be reviewed by faculty seeking research students; conversely applicants may contact faculty whose research specialty is of interest to inquire about available positions. Admission to the Master of Food Science will be based on the qualifications of the applicants.

Master's Degree Requirements: A Master's program must include courses from at least two of the following categories: chemistry-biochemistry, engineering, microbiology, nutrition and processing technology. The M. S. in Food Science requires 30 credit hours of course work and research. The Master of Food Science requires 36 credit hours of course work, including an independent project and professional skills.

Doctoral Degree Requirements: A doctoral program must include courses from at least three of the categories listed above (or equivalent courses at another university). Total course credits will vary depending on the needs of the student and the requirements of the Graduate School. All doctoral students are required to pass a departmentally administered written preliminary exam, designed to evaluate a Ph.D. student's general knowledge and comprehension of food science.

Student Financial Support: Graduate assistantships and other forms of student aid available to students in this program are described elsewhere in the Graduate Catalog. Admission does not guarantee availability of financial support.

Other Relevant Information: Students are encouraged to make personal contact with individual faculty whose research program is of interest to them. Information describing each faculty member's program is available at our website (http://ncsu.edu/foodscience).

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Foreign Languages and Literatures

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Foreign Languages and Literatures				Y			

GRADUATE FACULTY

R. V. Gross, Department Head

Director of Graduate Programs:

S. Despain, Box 8106, 919/513-1482, despain@ncsu.edu, Foreign Languages and Literatures

Named Professors: G. A. Dawes; Professors: T. P. Feeny, M. D. Garval, R. V. Gross, H. A. Jaimes, D. M. Marchi, J. Mari, J. A. Pasten, E. Tai; Emeritus Professors: J. R. Kelly, Y. B. Rollins, M. A. Witt; Associate Professors: V. Bilenkin, H. G. Braunbeck, M. A. Darhower, S. Despain, S. E. Garrigan, N. K. Isaacson, J. P. Mertz, J. C. Michnowicz, S. S. Mody, L. A.

Mykyta, V. A. Wust; *Emeritus Associate Professors:* R. A. Alder, S. T. Alonso, M. M. Magill, M. L. Salstad; *Assistant Professors:* M. R. Eley, R. E. Ronquest; *Teaching Associate Professors:* G. L. Mathews; *Teaching Assistant Professors:* K. Tharrington

The Master's degree in Foreign Languages and Literature offers concentrations in both French Language and Literature and Spanish Language and Literature.

Admission Requirements:

- A baccalaureate degree from an accredited college or university
- Undergraduate GPA of 3.0 or above
- GRE (Graduate Record Exam)
- Narrative statement of professional and personal objectives (in English, 300 words).
- Language proficiency as determined by a writing sample and a speaking sample in the target language (French or Spanish). Follow the specific sample guidelines at http://fil.chass.ncsu.edu/graduate/applying/info-sample.php.
- Some applicants may be given provisional admittance on condition of taking specific undergraduate courses conducted in the target language and passing with a B or better.
- Students admitted provisionally must complete at least 9 hours of graduate courses making grades of A or B to be considered for full graduate standing.
- Visit the program's web site (http://fll.chass.ncsu.edu/graduate) for complete admissions information.

Degree Requirements: The program requires at least 30 hours of course work and a culminating project. Each student's program is tailored to enhance his or her career objectives. Students who plan to pursue a Ph.D. or teach in a community college or university receive the requisite training and assistance. K-12 teachers who already have "Initial" or "A" licensure may earn "M" licensure by taking 30 hours in specified disciplines and completing an Action Research Project as their culminating project. K-12 teachers who already hold "A" licensure can add-on English as a Second Language (ESL) licensure by taking 36 hours in specified disciplines. Visit the program web site for complete departmental course requirement information (http://fil.chass.ncsu.edu/graduate/courses).

Student Financial Support: Graduate assistantships are available to students in both the French and Spanish concentrations and are awarded by open competition and based on the strength of the admissions application.

Other Relevant Information: Students are admitted for the fall semester only; deadlines for applications are February 15 for international students and May 1 for U.S. students. Students interested in a teaching assistantship indicate this interest on the Graduate School application and must have their application in by February 1 for full consideration.

Click on Graduate Courses - General for current course information.

Click on Graduate Courses - French for current course information.

Click on <u>Graduate Courses - Spanish</u> for current course information.

NCSU Graduate Catalog

Forest Biomaterials

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Forest Biomaterials	Y		Y		Y		

GRADUATE FACULTY

M. J. Hakovirta, Department Head

Director of Graduate Programs:

J. J. Pawlak, Box 8005, 919/513-0511, jjpawlak@ncsu.edu, Forest Biomaterials

Named Professors: A. M. Grunden, M. A. Hubbe, H. Jameel, S. A. Khan; Named Distinguished Professors: V. C. Chiang; Professors: D. S. Argyropoulos, M. J. Hakovirta, S. S. Kelley, A. G. Kirkman, E. O. Sills, D. C. Tilotta, R. A. Venditti; Adjunct Professors: R. B. Phillips, O. J. Rojas; Emeritus Professors: H. Chang, E. B. Cowling, E. L. Deal, E. L. Ellwood, I. S. Goldstein, J. A. Heitmann, L. G. Jahn, M. J. Kocurek, H. G. Olf, R. G. Pearson, R. J. Thomas, E. A. Wheeler; Associate Professors: L. A. Lucia, P. H. Mitchell, L. Pal, S. Park, J. J. Pawlak, P. N. Peralta, I. M. Peszlen, D. E. Saloni; Research Associate Professors: R. W. Kays; Associate Professors of the Practice: S. Dasmohapatra; Adjunct Associate Professors: E. A. Capanema, P. W. Hart; Assistant Professors: R. W. Gonzalez, Y. Yao; Adjunct Assistant Professors: A. Ayoub; Teaching Professors: S. D. Jackson; Teaching Associate Professors: M. V. Byrd

Course offerings and research facilities are available in the following areas: wood chemistry, biopolymer chemistry, bio-materials, bio-energy, pulping chemistry, process analysis, polymer chemistry, paper physics, paper recycling, wood physics (especially wood liquid relations), wood anatomy, wood biology, wood mechanics and engineering, wood machining, manufacturing processes, wood-based industry economics and marketing, and forest-based life cycle analysis.

Admission Requirements: Requirements listed here are in addition to graduate school requirements stated elsewhere. To be admitted, a student should have earned a B.S. degree with a major in wood and paper science or another suitable science or engineering degree. Students with a 3.0 GPA and with appropriate course backgrounds will be considered for admission. The GRE test scores are required except for the Master of Forest Biomaterials offered through Distance Education.

Master of Science Degree Requirements: The M.S. degree requires a minimum of 30 credit

hours. In addition, there are WPS core course requirements, which vary depending on the field of study. Six hours of research (WPS 695) must be taken. Two hours of Seminar (WPS 591) must be passed. A qualifying exam must be passed.

Master of Forest Biomaterials Degree Requirements: The Master of Forest Biomaterials is a non-thesis, professional degree for students not interested in a thesis-based research program. The Master of Forest Biomaterials degree is offered both on campus and through Distance Education. For the on-campus program a minimum of 36 course credits is required. The regulations regarding credits are the same as for the M.S. degree except that no credit for WPS 695 is required or given and up to six credits of 400-level courses in the major field may be included. A technical report, which demonstrates the student's ability to gather, analyze and report information is required.

In addition to Graduate School requirements, the Distance Education program requires that the student be employed professionally in a wood or paper science or allied field, have one year of professional experience, and take required WPS core courses, which vary depending on the field of study. A minimum of 30 course credits is required of students who have relevant professional experience, including one hour of Seminar (WPS 591) and five hours of an independent project (WPS 625). For distance students without relevant professional experience, 36 hours is required.

Doctoral Degree Requirements: In addition to Graduate School requirements, Ph.D. candidates must present two departmental seminars (WPS 791) before their final oral examination. Candidates must also write and defend a research proposal on their intended research (first proposition) and a research proposal on an area outside of their dissertation/thesis research (termed a second proposition) and pass qualifying exams.

Student Financial Support: A number of research assistantships and fellowships are available.

Other Relevant Information: Graduate students should select a committee chair and other advisory committee members and submit a plan of graduate work by the end of their first semester of residence. They are also required to take the qualifying examination as part of a Research Methods course. These examinations are to ensure that the student has the basic abilities to think independently as a scientist within the context of the forest biomaterials literature. The department believes M.S. and Ph.D. students should select a research topic and begin their dissertation or thesis research as early as possible.

As the field of forest biomaterials is a derived science, students are urged to develop a strong secondary area of excellence in one or more of the supporting disciplines such as organic chemistry, polymer chemistry, chemical engineering, mathematics, statistics, biology, engineering mechanics, mechanical engineering, physics, and economics or business administration.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Forestry and Environmental Resources

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Forestry and Environmental Resources	Y		Y		Y		

GRADUATE FACULTY

S. T. Gower, Department Head

Director of Graduate Programs:

T. H. Shear, Box 8008, 919/515-7794, <u>ted_shear@ncsu.edu</u>, Forestry and Environmental Resources

Named Professors: R. C. Abt; Named Distinguished Professors: V. C. Chiang; Professors: V. P. Aneja, R. E. Bardon, R. R. Braham, F. W. Cubbage, C. S. DePerno, J. Frampton, D. J. Frederick, B. Goldfarb, S. T. Gower, G. R. Hess, G. R. Hodge, F. Isik, J. B. Jett, S. Khorram, J. S. King, Y. Leung, B. Li, S. E. McKeand, R. K. Meentemeyer, C. E. Moorman, S. C. Nelson, E. G. Nichols, D. L. Osmond, M. N. Peterson, J. P. Roise, R. M. Scheller, E. O. Sills, M. Watzin, R. W. Whetten; Research Professors: M. D. Lowman; USDA Professors: F. E. Bridgwater, J. B. Holland, S. G. McNulty, G. Sun; USDI Professors: T. R. Simons; Adjunct Professors: K. L. Abt, H. E. Burkhart, C. H. Greenberg, T. P. Holmes, J. P. McTague, D. E. Mercer, L. S. Mills, U. J. Nilsson, M. Olsson, J. P. Prestemon, R. C. Purnell, K. H. Riitters, T. A. Steelman, C. Trettin, J. M. Vose, D. N. Wear; *Emeritus Professors:* H. L. Allen, A. W. Cooper, E. B. Cowling, H. A. Devine, P. D. Doerr, W. S. Dvorak, E. C. Franklin, J. D. Gregory, F. P. Hain, A. E. Hassan, L. E. Hinesley, J. B. Jett, R. C. Kellison, R. A. Lancia, L. A. Nielsen, E. A. Wheeler; Emeritus Distinguished Professors: S. W. Buol, R. R. Sederoff; Associate Professors: G. B. Blank, J. A. Delborne, R. E. Emanuel, D. W. Hazel, M. V. Katti, D. B. Morais, E. L. Seekamp, T. H. Shear; *Research Associate Professors:* C. B. Cooper, R. M. Jetton, R. W. Kays, K. M. Potter; Adjunct Associate Professors: D. M. Amatya, P. J. Donoso, W. G. Dorgeloh, A. L. James, F. H. Koch Jr, M. Lstiburek, R. A. Rubilar, S. J. Van Bloem; *Emeritus Associate* Professors: H. V. Amerson, S. T. Warren; Assistant Professors: M. L. Ardon Sayao, R. L. Cook, J. A. Forrester, J. M. Gray, Z. H. Leggett, K. Martin, J. K. Pacifici, R. Parajuli, L. Rivers, J. P. Wang; Research Assistant Professors: J. J. Acosta, J. K. Costanza, P. Nepal; Adjunct Assistant Professors: P. V. Caldwell, J. W. Coulston, W. P. Cumbie, G. E. Frey, E. F. Hain, J. S. Iiames, K. A. Mcginley, M. C. Moorman, C. Serenari, J. W. Smith, Y. Takeuchi; Extension Professors: M. A. Megalos; Teaching Associate Professors: J. B. McCarter, L. B. Pacifici; Teaching Assistant Professors: E. S. Money; Lecturers: W. G. Dorgeloh

The department offers training in all of the major sub-disciplines of forest, natural resources, and environmental-related science and management. Considerable flexibility is allowed in developing graduate programs tailored to the student's objectives.

Admission Requirements: All parts of the application, including the GRE general test, are considered in making decisions. Admission is competitive and depends on the willingness of at least one member of the faculty to serve as major professor. An undergraduate degree in forestry is not required.

Master's Degree Requirements: The Master of Forestry is now accredited by the Society of American Foresters. It requires 40 credits, with a 1 credit project. The Master of Science course work requirements range from 30 to 36 credits. Students without an appropriate background will require additional preparatory work. For the M.S. degree, a minor is required.

Doctoral Degree Requirements: As a rule, students must complete a master's degree before entering the Ph.D. program. However, exceptionally well-prepared students may petition to have their degree objective changed to Ph.D. before completing the master's degree. In addition to the dissertation, Ph.D. programs require 36 to 54 credits of course work beyond the master's degree. A minor is required.

Student Financial Support: Stipend levels allow students to graduate without incurring significant debt. Those who begin without an assistantship are considered for funding as projects become available. Additional funding is available through a limited number of teaching assistantships.

Other Relevant Information: MS and PhD graduate students must meet the following requirements: (1) take a one-credit research methodology course, FOR 603 or 803, early in his/her program; (2) take a seminar course (typically FOR 601/801), and (3) begin the final oral exam with a seminar to the department based on work accomplished during the graduate program.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Genetic Engineering and Society (Minor Program)

Professor F. Gould, co-Director 1552 Thomas Hall

Phone: 919.515.1647 Email: fgould@ncsu.edu

Professor J. Delborne, co-Director 5221 Jordan Hall Addition

Phone: 919.515.0106 Email: jadelbor@ncsu.edu IGERT home page: http://research.ncsu.edu/igert/

GES Minor home page: http://research.ncsu.edu/igert/graduate-program/ges-minor-program/

Overview

The interdisciplinary minor in Genetic Engineering and Society (GES) examines the technological, societal and ecological issues surrounding the development and potential use of genetically engineered organisms. Participants in the minor will learn the basic concepts and principles underlying genetic engineering and the methods used for evaluating the technology's social, cultural and environmental dimensions. Initially, the minor is focused on genetic pest management, but will broaden to consider other applications of genetic engineering, including genetically modified crops and synthetic biology. The graduate minor is available to students pursuing either an MS or a PhD degree.

Requirements

In order to complete the minor, coursework must be taken in relevant areas of natural sciences and the humanities and social sciences. 9 credit hours from a list of approved courses (see below) are required, 6 of which must be the two core GES courses. The remaining 3 credit hours must be fulfilled by a course from the list of approved courses that is outside the students' home discipline. A grade of B or higher must be achieved in each course counted towards the minor. In addition, a student must have a GES faculty member on his or her committee (see link> GES program homepage for a list of the GES faculty), and this faculty member should be from a discipline other than the student's major, ensuring that there is representation from both humanities/social science and natural science.

The choice of courses must be consistent with the interdisciplinary outlook of this minor, namely that students will learn the basic concepts and principles underlying genetic engineering and the methods used for evaluating the technology's social, cultural and environmental dimensions. The minor representative will be responsible for ensuring that the courses taken are appropriate and balance the student's major. Students in the biological sciences will be encouraged to take hands on courses, such as those offered by the BIT program.

Approved courses

Core courses:

GES/ENT 506 (3 CR) Principles of Genetic Pest Management GES/COM/HI 508 (3 CR) Emerging Technologies and Society GES 591 (3 CR) Governance, Systems and Modeling

Other approved courses:

ANT 550 Culture, Ecology, and Sustainable Living BIT 410/510 Manipulation of Recombinant DNA COM 536 Seminar in Environmental Communication ECG 540 Economic Development ENG 515 Rhetoric of Science and Technology FW 411/511 Human Dimensions of Wildlife Management GN 735 Genomic Science HI 540 Topics in Environmental History
HI 581 History of the Life Sciences
HI 585 History of American Technology
NR 571 Current Issues in Natural Resource Policy
REL 571 Darwinism and Christianity
PA 598/798 Science and Technology Policy
PHI 475/575 Ethical Theory
PSY 757 Innovation and Technology
ST 590 A,C Bioinformatics I/II

Additional courses may be added to the approved list, as determined by the Executive Committee. Courses may be substituted at the Co-Directors' discretion.

Genetics

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Genetics	Y		Y		Y		

GRADUATE FACULTY

Director of Graduate Programs:

R. B. Roberts, Box 7614, reade_roberts@ncsu.edu, Biological Sciences

Named Professors: J. M. Alonso, R. E. Dewey, J. B. Ristaino, B. M. Wiegmann; Named Distinguished Professors: R. R. Anholt, V. C. Chiang, R. A. Dean, F. L. Gould, L. K. Hanley-Bowdoin, C. J. Schal, Z. Zeng; Named Distinguished University Professors: T. F. MacKay; Distinguished University Professors: M. M. Goodman, W. F. Thompson; Professors: M. Breen, I. Carbone, R. G. Franks, J. R. Godwin, C. H. Haigler, F. Isik, R. S. Lewis, H. Liu, J. W. Mahaffey, K. M. Meurs, S. V. Muse, N. J. Olby, M. J. Scott, S. M. Sullivant, J. L. Thorne, J. Tzeng, K. R. Weninger, Q. Xiang; USDA Professors: J. B. Holland; Adjunct Professors: R. E. Cannon, E. A. Stone, D. W. Threadgill; *Emeritus Named Professors:* W. F. Boss, E. Eisen; Emeritus Professors: S. E. Curtis, W. E. Kloos, D. F. Matzinger, W. H. McKenzie, J. G. Scandalios, H. E. Schaffer; *Emeritus Named Distinguished Professors:* W. R. Atchley, C. S. Levings, E. A. Wernsman; Emeritus Named Distinguished University Professors: T. R. Klaenhammer; *Emeritus Distinguished Professors:* R. R. Sederoff; *Associate Professors:* R. Barrangou, C. Beisel, G. C. Conant, T. Ghashghaei, S. Heber, V. Kuraparthy, R. B. Langerhans, T. A. Long, M. D. Lorenzen, C. Maltecca, S. R. Milla-Lewis, A. A. Motsinger-Reif, D. M. Nielsen, X. Peng, M. Pierce, D. M. Reif, M. L. Sikes, J. A. Yoder; Research Associate Professors: P. A. Estes; USDA Associate Professors: P. J. Balint-Kurti; Emeritus USDA Professors: C. W. Stuber; Adjunct Associate Professors: W. O. McMillan, N. Singh; Assistant Professors: H. Ashrafi, D. L. Aylor, M. A. Cowley, J. R. Elfenbein, R. Ke, A. J. Keung, C. Laplante, K. Marsden, L. A. McGraw, S. K. Mishra, F. M. Mowat, C. C. Nestor, A. J. Planchart,

G. T. Reeves, M. H. Reiskind, R. B. Roberts, A. San Miguel Delgadillo, R. Sozzani, A. N. Stepanova, C. M. Theriot; *Research Assistant Professors:* M. A. Carbone, M. B. Reiskind, Y. Zhou; *USDA Assistant Professors:* A. M. Hulse-Kemp; *Adjunct Assistant Professors:* R. E. Cannon; *Teaching Professors:* M. B. Gardner; *Teaching Assistant Professors:* C. L. Gordy, C. J. Halweg, W. M. Jones, J. Little

The Genetics Graduate Program is a University wide program. Current faculty are in 14 Departments and four Colleges. The Genetics Program provides a well-balanced program of graduate course work and research training. The faculty conducts basic research in all areas of genetics, including molecular, cellular and developmental genetics; behavioral genetics, biomedical genetics, evolutionary, population and quantitative genetics, statistical genetics, and bioinformatics. Faculty research utilizes both traditional model organisms (fruit flies, mice and Arabidopsis) and non-traditional systems (cats, cockroaches, dairy cattle, dogs, maize, pigs, pine trees and more). Interdisciplinary research is encouraged.

Admission Requirements: Applicants may come from a number of undergraduate programs that include biological, agricultural, physical and mathematical science training. All applications are screened by an admissions committee, and the best qualified applicants will be accepted up to the number of spaces that are available for new students.

Master's Degree Requirements: The M.S. degree requires a minimum of 30 credit hours, of which 14 hours are core course requirements, three hours are additional elective graduate courses with substantial genetics content, and three hours are other elective graduate courses. M.S. students majoring in Genetics are required to complete dissertation research with three credit hours of Master's Supervised Research, six credits of Master's Thesis Research, one credit of Master's Thesis Prep, and one credit of Master's Examination. M.S. students are also required to teach one semester of undergraduate courses and may enroll in Master's Supervised Teaching. 12 hours of required courses are required for Genetics minors. The Master's of Genetics requires a minimum of 31 credit hours, of which 17 hours are core course requirements, six hours are additional elective genetics courses and eight hours are elective graduate courses.

Doctoral Degree Requirements: A total of 18 hours of seven core courses and 12 hours of elective graduate courses, nine of which have substantial genetics content, is required of all majors. Ph.D. students majoring in Genetics are required to complete dissertation research with three credit hours of Doctoral Supervised Research and a combination of Doctoral Dissertation Research, Doctoral Preliminary Examination, and Doctoral Dissertation Prep to total 39 hours. Students are also required to and teach two semesters of undergraduate courses and may enroll in six credits of Doctoral Supervised Teaching to be used toward the remaining 39 credit hours. 12 hours of required courses are required for Genetics minors.

Student Financial Support: Graduate assistantships and fellowships are available to the students from a number of sources. Information will be provided at the time of acceptance into the program.

Other Relevant Information: All M. S. and Ph. D. students rotate through three laboratories during their first semester. At the end of the semester, they choose a laboratory for their research activities consistent with their interests and available research projects. Provisions are available for a co-major and collaborative research in more than one laboratory.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Genomic Sciences

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Bioinformatics	Y				Y		
Functional Genomics	Y		Y		Y		

GRADUATE FACULTY

Directors of Graduate Programs:

D. M. Bird, Box 7253, 919/515-1967, <u>david_bird@ncsu.edu</u>, Entomology and Plant Pathology S. V. Muse, Box 7566, 919/515-1948, <u>muse@ncsu.edu</u>, Statistics

Named Professors: J. M. Alonso, D. M. Bird, M. Davidian, R. E. Dewey, A. M. Grunden, R. M. Kelly, J. B. Ristaino, A. A. Tsiatis, B. M. Wiegmann, G. C. Yencho; Named Distinguished Professors: R. R. Anholt, R. S. Boston, V. C. Chiang, M. E. Daub, R. A. Dean, J. Doyle, L. K. Hanley-Bowdoin, S. Lommel, J. Odle, Z. Zeng; Named Distinguished University Professors: T. F. MacKay; Distinguished Professors: M. A. Vouk; Distinguished University Professors: D. L. Bitzer, M. M. Goodman, W. F. Thompson; *Professors:* K. B. Adler, P. Arasu, C. M. Ashwell, R. J. Borski, M. Breen, E. B. Breitschwerdt, D. T. Brown, J. W. Brown, I. Carbone, G. A. Dean, C. E. Farin, R. G. Franks, F. J. Fuller, J. E. Gadsby, S. K. Ghosh, J. R. Godwin, B. Goldfarb, J. M. Haugh, C. L. Hemenway, J. M. Horowitz, J. M. Hughes-Oliver, E. L. Kaltofen, S. Kathariou, J. A. Knopp, B. Li, H. Liu, J. W. Mahaffey, E. S. Maxwell, S. E. McKeand, M. S. Merrill, E. S. Miller, P. E. Mozdziak, D. C. Muddiman, S. V. Muse, C. H. Opperman, J. N. Petitte, R. M. Petters, J. A. Piedrahita, M. C. Sagui, H. A. Sederoff, B. Sherry, R. C. Smart, S. M. Sullivant, J. L. Thorne, J. Tzeng, R. W. Whetten, P. L. Wollenzien, F. A. Wright, Q. Xiang, D. Xie, D. Zhang; Research Professors: J. Cavanagh; USDA Professors: J. B. Holland; Adjunct Professors: J. Cavanagh, J. L. Gibson, E. A. Koutsos, M. S. McGinnis, E. A. Stone, R. D. Wolfinger; *Emeritus Named Professors:* W. F. Boss, E. Eisen; *Emeritus Professors:* S. D. Clouse, S. E. Curtis, D. H. Ley, J. W. Moyer, P. E. Orndorff, W. Tompkins; *Emeritus Named* Distinguished Professors: W. R. Atchley, G. A. Payne; Emeritus Named Distinguished University Professors: T. R. Klaenhammer; Emeritus Distinguished Professors: R. R. Sederoff; Associate Professors: R. Barrangou, J. M. Bruno-Barcena, G. C. Conant, M. B. Goshe, S. Heber, C. Hoyo, M. D. Koci, S. Komarnytsky, D. S. Lalush, X. Li, T. A. Long, A. Maity, C. Maltecca, F. Meilleur, A. A. Motsinger-Reif, N. M. Nascone-Yoder, D. M. Nielsen, J. W. Olson, X. Peng, M. Pierce, B. J. Reich, D. M. Reif, M. Rodriguez-Puebla, M. L. Sikes, C. E. Smith, L. J. Unruh Snyder, J. A. Yoder; *Research Associate Professors:* P. A. Estes; *Adjunct Associate Professors:* L. Li, W. O. McMillan, N. Singh; *Emeritus Associate Professors:* H. V. Amerson; *Assistant Professors:* H. Ashrafi, D. L. Aylor, C. J. Doherty, D. Fourches, T. Hsieh, M. Iorizzo, C. C. Nestor, B. J. Reading, R. Sozzani, A. N. Stepanova; *Research Assistant Professors:* Y. Zhou; *USDA Assistant Professors:* A. M. Hulse-Kemp, I. M. Perez Diaz; *Adjunct Assistant Professors:* J. L. Stephenson; *Teaching Associate Professors:* J. L. Lubischer; *Teaching Assistant Professors:* A. Y. Scales

Genomic sciences has two components. Functional genomics, the generation of large bodies of data relating to organism function, encompasses gene discovery, gene expression, protein and nucleic acid structure and function, gene and gene product interactions, and genomic approaches to breeding and comparative studies relevant to ecology and evolutionary biology. Bioinformatics is the analysis of these vast and complex data sets including methods to analyze extremely large sets of genomic information such as DNA sequences and expression from DNA microarrays. Students register in either of these two fields but also receive a solid grounding in the other through core courses common to both programs. Unique and exceptional resources include the Bioinformatics Research Center and the Genome Research Laboratory.

Admission Requirements: Students should have an undergraduate major in the biological or physical sciences, mathematics, statistics or computer science and have completed calculus and other comparable courses. In addition to the other application requirements, a student should submit a statement of interests and career goals.

Master's Degree Requirements: Students take a 15-credit core curriculum of courses common to both programs followed by courses specific to the degree and discipline. The Master's of Bioinformatics requires a minimum of 33 credit hours. The Master's of Functional Genomics requires a minimum of 30 credit hours, and the Master's of Science in Functional Genomics requires a minimum of 36 credit hours.

Doctoral Degree Requirements: The Ph.D. program requires a total of 72 credits, and all students participate in a journal club, monthly seminar series and research ethics training. A comentoring system exists between bioinformatics and functional genomics through which each student has advisors from both disciplines. Throughout the program they will have the opportunity to gain practical experience in the Genome Research Laboratory, Bioinformatics Research Center and DNA Sequencing Facility.

Student Financial Support: A significant number of fellowships are available through the genomics program, and students may also be supported by research grant funds awarded to genomics faculty members.

GRADUATE COURSES

Many courses are available and cross-listed through 25 participating departments in the Colleges of Agriculture & Life Sciences, Engineering, Natural Resources, Physical & Mathematical Sciences, and Veterinary Medicine.

NCSU Graduate Catalog

Geographic Information Systems (Minor Program)

Dr. Eric Money

Center for Geospatial Analytics

NCSU Box 7106 Phone: 919.513.0408

Email: esmoney@ncsu.edu

Website: https://cnr.ncsu.edu/geospatial/academics/programs

The Geographic Information Systems (GIS) minor provides an academic credential for students who have developed some GIS application skills while pursuing a graduate degree in another discipline. It is designed for students who wish to master the basics of GIS analysis and to develop more advanced skills in a particular application area.

Prerequisite: Graduate status (non-Option B).

Course Requirements: Students must complete a total of 9 credit hours (6 hours from required courses and 3 hours from electives). See <u>GIS minor website</u> for course details.

Other Requirements: A GIST faculty member must be on the student □s graduate committee. A list of currently approved faculty members can be provided to students upon request. If no graduate committee is required by the student □s program, the student must obtain approval of his or her minor program. Students enrolled in Option B Masters programs are not eligible to declare a minor. Certificate coursework and Minor coursework must be completely independent.

Geospatial Analytics

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
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GRADUATE FACULTY

The PhD in Geospatial Analytics is an integrative program bringing together the Center for Geospatial Analytics (CGA) with departments from across NC State to produce a new generation of interdisciplinary data scientists skilled in developing novel understanding of spatial phenomena. The program connects students with mentors and peers across multiple disciplines and provides scientific and professional knowledge through practicing geospatial analytics in academia, industry, and government agencies. The program consists of (1) multidisciplinary advising, (2) an intense core curriculum that covers advanced theory in the geospatial sciences along with specialized training in the quantitative, algorithmic, and systems aspect of geospatial computing, information technology, applications, and analytics, in combination with domain research and coursework, (3) an internship experience, and (4) a complete dissertation that advances the field of geospatial science, GIS, and geospatial analytics.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Geospatial Information Science and Technology

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Geospatial Information Science and Technology					Y		

GRADUATE FACULTY

Director of Graduate Programs:

E. S. Money, Box 7106, esmoney@ncsu.edu, Ctr. for Geospatial Analytics

Professors: E. H. Bressler, D. A. Crouse, G. D. Garson, C. G. Healey, R. W. Heiniger, G. R. Hess, S. Khorram, H. Krim, D. K. Larick, Y. Leung, J. F. Levine, R. K. Meentemeyer, H. Mitasova, S. C. Nelson, M. F. Overton, W. J. Rasdorf, A. R. Rice, R. A. St. Amant, H. J. Trussell, S. E. Yuter; USDI Professors: T. J. Kwak; Emeritus Professors: H. A. Devine; Associate Professors: D. R. Bohnenstiehl, G. T. Roberson, W. R. Smith, R. R. Vatsavai, K. W. Wegmann, J. G. White, S. B. Wiley; Research Associate Professors: P. K. Baran, R. W. Kays; Adjunct Associate Professors: F. H. Koch Jr; Emeritus Associate Professors: M. L. Vasu; Assistant Professors: J. M. Gray, J. Vukomanovic; Adjunct Assistant Professors: J. W. Coulston, E. F. Hain, E. L. Hestir, M. R. Loomis, J. W. Smith; Teaching Associate Professors: J. B. McCarter; Teaching Assistant Professors: E. S. Money, S. K. Supak, L. G. Tateosian

The Master of Geospatial Information Science and Technology (MGIST) equips students with the necessary knowledge and tools to become high-end geospatial professionals using a unique curriculum that leverages NC State's strengths in computational and data sciences, information technology, and interdisciplinary training in combination with professional skills development in areas of project management, technical writing, and communications. The MGIST can be

completed entirely online, allowing flexibility for both students just entering the work force and working professionals.

Through a combination of geospatial theory, hands-on applications, and client-based service-learning experiences, students graduate from the program with a solid foundation to provide a wide range of geospatial expertise for local, state, national, and international organizations.

Admissions Requirements: Admission to the program requires an undergraduate GPA of 3.0 or better, a professional resume, a personal statement describing the applicant's professional ambitions and experience, and 3 letters of reference. Students with less than a 3.0 undergraduate GPA may be considered for provisional admission into the MGIST or referred to the GIS Certificate program to enhance skills and prepare for reapplication to the MGIST.

Master's Degree Requirements: The MGIST degree requires 33 course credit hours including a 3-credit-hour Capstone course and development of a professional portfolio highlighting geospatial analytic skills and competencies. A cumulative GPA of 3.0 or better is required in order to graduate. Specific course requirements are listed on the MGIST web site.

Student Financial Support: Students in this program are eligible for financial aid and may compete for program assistantships and internships.

Other Relevant Information: The GIS program also offers a <u>Graduate Certificate in GIS</u> (12 credit hours). Certificate students may transfer up to 12 credits into the MGIST degree. Students enrolled in other NC State graduate programs may enroll in the Certificate program or in either of the two related minors (GIS or Environmental Remote Sensing).

NCSU Graduate Catalog

Graphic Design

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Graphic Design					Y		

GRADUATE FACULTY

T. Liu, Department Head

Director of Graduate Programs:

D. Gonzales Crisp, Box 7701, 919/515-8361, denise_crisp@ncsu.edu, Graphic and Industrial Design

Professors: D. Gonzales Crisp, H. Holljes, T. Liu; *Emeritus Professors:* M. J. Davis, A. S. Lowrey; *Associate Professors:* H. S. Armstrong, K. L. Bailey, R. A. Flinchum, C. Gill, S. Townsend; *Assistant Professors:* D. A. Ham, D. K. Littlejohn, M. O. Peterson, K. A. Umstead

Today's design problems are complex, require systems-oriented thinking, and call for new problem-solving paradigms. The contemporary culture is participatory, arguing for greater user influence and the design of tools and systems through which people create their own experiences. Rapid technological evolution challenges the traditional "almost perfect" goal of design, accepting that design will arise from an organic approach to problem solving, not a mechanistic one. And designers are increasingly accountable for anticipating the outcomes of design decisions with real people and need research skills to forecast changes in the surrounding context.

Studios and seminars in the Master of Graphic Design program explore the implications of thinking about user experience and research from these perspectives. Student work invites dialogue through the propositional artifacts and systems that students design.

At the same time, the Master of Graphic Design is not a fine arts program. Student work must convince thought leaders that new ideas about communication can live in the world of professional design practice and add value to people's lives. To make that argument, it must be informed by deep understanding of people, activities, and settings and its effects must be nested within larger physical, cultural, social, and technological systems. The program acquaints students with methods for studying these things and for describing them to audiences outside of design. The program has the broad objective to educate socially responsible, intellectually curious, historically aware, and technologically adept communication design professionals.

Admissions Requirements: Applications are due to the Department of Graphic Design and Industrial Design by January 5. Contact the Director of Graduate Programs to discuss the feasibility of late application.

In addition to Graduate School requirements, the Department asks for department personal data forms, a written statement of intent, and a website or accessible online PDF portfolio—designed specifically for application to the program—that demonstrates experience and skills in visual communication.

MGD II Track: Applicants whose first degree is a BFA (or BGD) in graphic design should apply to the MGD II program. The applicant ideally will have worked in professional practice for at least one year, however recent BFA graduates will be considered.

MGD III Track: Applicants whose first degree is not in graphic design but who have some graphic design experience should apply to the MGD III program. Applicants who have earned a BA or BS (rather than a BFA) in visual art or design will be considered for the MGD III program. This initial year in advanced graphic design practices prepares candidates for the MGD II curriculum, and therefore the portfolio submitted should demonstrate sufficient experience to undertake our upper-level undergraduate coursework. In the statement of intent, applicants

should describe a research connection between the first discipline and the intended graduate graphic design study. MGD III applicants are required to supply GRE scores.

Master's Degree (MGD II) Requirements: The Master of Graphic Design degree requires a minimum of 48 credit hours. The program generally does not accept transfer credits in lieu of required coursework at NC State.

Student Financial Support: The department has limited provisions for tuition remission and assistantships. Assistantships are awarded on the basis of student and departmental needs, student GPA, and pertinent work experience. Assistantship requests should be made to the Department Head of Graphic Design and Industrial Design, and should be submitted with the application for admission (for incoming students) or by advertised deadline (for continuing students).

Click on **Graduate Courses** for current course information.

NCSU Graduate Catalog

History

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
<u>History</u>				Y			
Public History	Y			Y			

GRADUATE FACULTY

D. A. Zonderman, Department Head

Directors of Graduate Programs:

J. E. Rudolph, Box 8108, 919/515-2483, jerudolp@ncsu.edu, History

T. S. Gordon, Box 8108, tsgordo2@ncsu.edu, History

Named Professors: D. P. Gilmartin; Distinguished University Professors: W. Adler;
Professors: R. K. Bassett, C. T. Friend, O. J. Kalinga, A. F. Khater, M. G. Kim, K. P. Luria, A. W. Mitchell, S. T. Parker, J. E. Rudolph, R. W. Slatta, K. S. Vincent, D. A. Zonderman;
Emeritus Professors: J. E. Crisp, M. S. Downs, J. M. Riddle, S. L. Spencer, K. P. Vickery;
Associate Professors: D. R. Ambaras, M. M. Booker, T. S. Gordon, B. M. Kelley, W. C. Kimler, S. M. Lee, J. L. Mell, K. Mellen Charron, B. S. Sirota, N. B. Strote; Emeritus Associate
Professors: G. Surh; Assistant Professors: M. L. Cherry, F. Freitas, E. P. Jones, V. I. Kasper-Marienberg, J. Kertesz, A. E. McGill, T. S. Paulette; Adjunct Assistant Professors: J. W.

Admission Requirements: Admission to the M.A. in History and Public History and Ph.D. in Public History programs require: a bachelor's degree from an accredited college or university; transcripts; scores from the Graduate Record Exam (GRE); personal statement, listing career goals, historical interests, and potential advisor; letters of recommendation; and a writing sample of approximately ten pages. See the program's website (http://history.chass.ncsu.edu/grad/apply.php) for additional details.

Master's Degree Requirements: Master of Arts Degree in History: This program requires a total of 30 credit hours, including 6 hours in core courses, 12 credit hours in a major field, 6 credit hours in a minor field, and 6 credit hours in thesis work. Each student's program is tailored to enhance his or her career objectives. Social studies teachers, for example, may earn advanced competency on completion of the M.A. in history with additional course work in education. Similarly, students who plan to pursue a Ph.D. degree receive the requisite training and assistance. Master of Arts Degree in Public History: This program requires 36 credit hours of course work. Students may take a non-thesis or thesis option. Half the hours fall in historical studies, the rest in applied history classes, including innovative courses in museum studies and heritage studies. Students perform internships in their own special areas of interest.

Doctoral Degree Requirements: The Ph.D. program in Public History requires 72 credit hours. Students complete 21 credit hours in a public history field, including an internship; 21 credit hours in a history field; 6 credit hours in an outside field; and 24 credit hours of dissertation work.

Student Financial Support: Graduate teaching assistantships are available to students in all programs and are awarded by open competition.

Other Relevant Information: The application deadline for fall semester is January 15; students are admitted for the fall semester only.

Click on **Graduate Courses** for current course information.

NCSU Graduate Catalog

Horticultural Science

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Horticultural Science	Y		Y		Y		

GRADUATE FACULTY

W. G. Buhler, Department Head

Directors of Graduate Programs:

C. Gunter, Box 7609, chiral-gunter@ncsu.edu, Horticultural Science
H. T. Kraus, Box 7609, 919/515-1208, helen kraus@ncsu.edu, Horticultural Science

Named Professors: M. D. Boyette, G. C. Yencho; Named Distinguished Professors: N. G. Creamer, D. J. Werner; Professors: W. G. Buhler, J. M. Dole, G. E. Fernandez, W. C. Fonteno, J. L. Kornegay, D. W. Monks, J. C. Neal, P. M. Perkins-Veazie, T. G. Ranney, J. R. Schultheis, T. C. Wehner, B. E. Whipker, F. H. Yelverton, E. Young; Adjunct Professors: J. L. Gibson, M. S. McGinnis, P. S. Zorner; Emeritus Professors: W. E. Ballinger, T. E. Bilderback, S. D. Clouse, A. A. DeHertogh, P. R. Fantz, R. G. Gardner, W. R. Henderson, L. E. Hinesley, W. E. Hooker, T. R. Konsler, C. M. Mainland, T. J. Monaco, P. V. Nelson, E. B. Poling, M. A. Powell, W. A. Skroch, S. E. Spayd, C. R. Unrath, L. G. Wilson; Associate Professors: L. K. Bradley, J. D. Burton, J. M. Davis, B. Fair, C. Gunter, B. E. Jackson, K. M. Jennings, H. T. Kraus, A. V. Lebude, D. R. Panthee, M. L. Parker, J. T. Sherk, A. M. Spafford; Research Associate Professors: G. C. Allen; Adjunct Associate Professors: J. S. Owen; Emeritus Research Associate Professors: J. D. Williamson; Assistant Professors: H. Ashrafi, J. D. Bloom, R. Hernandez, M. Hoffmann, M. Iorizzo, T. M. Kon, W. Liu; Research Assistant Professors: G. Gusmini

The NCSU Horticultural Science Graduate Program offers one of the most comprehensive programs in the country – providing students with a broad selection of courses and projects ranging from applied industry-oriented studies to molecular biology. Studies may focus on commodity areas such as floriculture, ornamental and landscape horticulture, pomology (fruit crops) and olericulture (vegetables) or on cross-commodity topics such as plant physiology, breeding and genetics, genomics, herbicide physiology and weed control, nutrition, propagation, tissue culture, growth regulators, sustainable agriculture, postharvest physiology, and controlled environments.

Admission Requirements: To be admitted, a student should have completed course work in mathematics, chemistry (inorganic and organic), genetics, plant physiology, and several courses in horticulture, agronomy and/or botany. Priority is given to students who have also completed courses in biochemistry, plant pathology, entomology, soil science, statistics and physics. An applicant deficient in course work may be admitted on a provisional basis until the deficiency is made up. Applicants must provide the basic Graduate Record Examination (GRE) scores, test of English as a foreign language (TOEFL) scores (applicant are from non-English speaking countries), three letters of reference, copy of transcript for each prior degree, statement of career goals, and current resume or CV.

Master's Degree Requirements: The Master's degree is a research-oriented degree requiring 30 credit hours and a written thesis. Four one-credit core courses and two credits of HS 601 must be completed. Up to 6 of the 30 credits may be research credits (HS 695). At least 24 semester hours must be 500, 600 or 700 level courses, and 6 of these credits must be at the 700 level.

For students wishing a more general educational background in horticultural science without the thesis requirement, the Master of Horticultural Science (M.H.S.) degree is offered. The M.H.S. requires 36 credit hours. Twenty-four (24) credits must be at the 500-700 level. Two credits of HS 601 are required. Up to 12 hours of 400-level courses can be taken as a part of the M.H.S. program, however, only six hours of HS 400-level courses are allowed. (The NCSU Graduate School does not allow any 400-level courses from the home department, but only requires 30 credit hours for a Master's degree. We require 36 credits, of which 6 credits can be HS 400-level courses. Permission from the NCSU Graduate School is required for HS 400-level courses.) Students are encouraged, but not required, to fulfill the four credit Horticultural Science core course requirement. The M.H.S degree is also available through Distance Education.

Doctoral Degree Requirements: The Ph.D. program is designed for individuals desiring to pursue careers in research and teaching. A minimum of 54 credit hours beyond the Master of Science program is required. Three credits of core courses and two credits of HS 601 are required, if not taken as part of a prior M.S. degree in the Horticultural Science department.

Student Financial Support: The department has a limited number of assistantships available on a competitive basis for promising students. The assistantship includes salary, tuition and health insurance as covered under the Graduate School's Graduate Student Support Plan. Applicants are considered for assistantship support at the time of application. Those interested should apply at least seven months prior to their anticipated enrollment date. Also, many faculty programs have research grant-funded assistantships; potential students should contact faculty directly for those programs of interest.

Other Relevant Information: Facilities for graduate studies include 40,500 square feet of greenhouse space on main campus and the nearby Horticultural Field Lab; the University Phytotron (available for controlled environmental studies on horticultural crops); 19 well-equipped laboratories; 14 controlled temperature storage rooms, an extensive collection of plant materials, both living and preserved; and a variety of climates and soils from coast to mountains in North Carolina on fifteen outlying research stations. North Carolina has a dynamic horticulture industry, ranking among the top ten in many of the commodity areas.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Industrial Design

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Industrial Design					Y		

GRADUATE FACULTY

Director of Graduate Programs:

S. B. Joines, Box 7701, 919/515-8347, sharon_joines@ncsu.edu, Graphic and Industrial Design

Professors: C. D. Cox, H. Holljes, S. B. Joines, T. Liu; *Emeritus Professors:* V. Foote, C. E. Joyner, H. Khachatoorian; *Associate Professors:* H. S. Armstrong, T. W. Buie, L. M. Diaz, P. J. Fitzgerald, C. Gill, P. R. Hooper, B. Jin, B. W. Laffitte; *Emeritus Associate Professors:* V. K. Plume, D. G. Raymond, S. M. Toplikar; *Assistant Professors:* D. A. Ham, M. O. Peterson, K. A. Umstead; *Teaching Assistant Professors:* W. Ginn

Industrial Design is the professional service of creating and developing concepts and specifications that optimize the value, function and appearance of products and product systems to the mutual benefit of both user and manufacturer. This service is often provided in the context of a cooperative working relationship with other members of a development group.

Typical groups include management, marketing, engineering and manufacturing specialists. Industrial designers place special emphasis on human characteristics, needs and interests. These require particular understanding of visual, tactile, safety and convenience criteria. Industrial designers combine these considerations with practical concern for technical processes and requirements for manufacture; marketing opportunities and economic constraints; and distribution, sales and servicing arrangements. Industrial designers are guided by the awareness of their obligations to protect and promote public safety and well-being; to respect the environment; and to observe ethical business practices. Augmenting transdisciplinary practices, emerging areas of industrial design include design research and experience design.

Graduates with a Master of Industrial Design have career opportunities in four general areas; corporate design offices in manufacturing companies, design consulting firms, governmental agencies and educational institutions.

Admissions Requirements: Students must make application to the Department of Graphic Design and Industrial Design by January 5. In addition to Graduate School requirements, the Department requires department personal data forms, a digital portfolio of design work, resume, and a statement of intent. The GRE is required for students whose first degree is not in Industrial Design.

Master's Requirements: The Master of Industrial Design degree requires a minimum of

• 48 credit hours for applications with a Bachelor's degree in Industrial Design (Track II), or

• 78 credit hours for applications with Bachelor's degrees in an area other than Industrial Design (Track III).

The program generally does not accept transfer credits in lieu of required coursework at NC State. Studio credits presented for elective transfer must be accompanied by a portfolio of work from the courses under consideration.

Student Financial Support: The Department has limited provisions for tuition remission and assistantships. Assistantships are awarded on the basis of student and departmental needs. Assistantship requests should be made to the Department of Graphic Design and Industrial Design and should be submitted with the application for admission (for incoming students) or by advertised deadline (for continuing students).

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Industrial Engineering

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Industrial Engineering	Y		Y		Y		

GRADUATE FACULTY

J. L. Swann, Department Head

Directors of Graduate Programs:

M. G. Kay, Box 7906, 919/515-2008, <u>kay@ncsu.edu</u>, Industrial Engineering Y. Fathi, Box 7906, 919/515-6417, <u>fathi@ncsu.edu</u>, Industrial Engineering

Named Professors: P. Cohen, S. Fang, R. E. King, R. A. Wysk; Named Distinguished Professors: R. Uzsoy; Named Distinguished University Professors: T. J. Hodgson; Distinguished Professors: O. A. Harrysson, J. L. Swann; Professors: G. D. Buckner, Y. Fathi, J. S. Ivy, D. B. Kaber, Y. Lee, L. A. Martin, M. E. Mayorga, R. J. Narayan, J. R. Wilson; Adjunct Professors: S. M. Hsiang, G. Kazemi Tutunchi, C. D. Rock; Emeritus Named Professors: A. L. Prak, S. D. Roberts; Emeritus Professors: M. A. Ayoub, R. H. Bernhard, T. Johnson, R. G. Pearson, W. A. Smith, R. E. Young; Emeritus Distinguished Professors: C. T. Culbreth Jr; Associate Professors: J. Dong, M. G. Kay, J. P. Lavelle, C. S. Nam, B. Starly, D. P. Warsing; Research Associate Professors: J. Taheri, H. A. West II; Adjunct Associate Professors: N. J. Currie, B. Denton, R. Stoll, A. R. Vila-Parrish; Emeritus Associate Professors: T. L. Honeycutt, E. Sanii; Assistant Professors: K. B. Chen, O. Y. Ozaltin, X. Xu; Research Assistant

Professors: T. J. Horn; Adjunct Assistant Professors: S. S. Ahiska, J. E. Mason, M. Swangnetr, L. A. Tupler; Teaching Professors: S. D. Jackson, H. L. Nuttle; Teaching Associate Professors: K. T. Reynolds; Lecturers: M. R. Spano

The graduate faculty of the Edward P. Fitts Department of Industrial and Systems Engineering supports academic and research interests in four areas: (1) manufacturing systems (manufacturing processes, medical device manufacturing systems, CAM, CIM, robotics, automation, rapid prototyping and concurrent engineering); (2) production systems (logistics systems, supply chain management, scheduling, inventory control, materials handling, facility design, furniture manufacturing and management, quality control, and engineering economics); (3) systems analysis and optimization (health systems, stochastic processes, simulation, mathematical programming, and soft computing); and (4) ergonomics (human performance, occupational safety, and biomechanics). The department faculty actively supports independent graduate degree programs in operations research, integrated manufacturing systems engineering, textile technology and management, and financial mathematics.

Admission Requirements: Applications are accepted from undergraduate majors in engineering and in the behavioral, physical and mathematical sciences who meet prerequisites in calculus and linear algebra, computer science, and statistics.

Master's Degree Requirements: The M.S. degree requires 30 credit hours and involves depth of study in a specified area of concentration, nine hours in a minor, and six hours of research credit. The Master of Industrial Engineering (M.IE.) degree may be obtained by course work only; project work is optional. A minimum of 33 credit hours is required for the M.IE.

Doctoral Degree Requirements: This degree requires 72 credit hours of course and research work beyond the Bachelor's degree. Undergraduate students with superior credentials may apply directly to the doctoral program and bypass the master's degree. For students who have completed the Master's degree, typically 30 to 36 hours of additional course work are required. A departmental written qualifying examination is required.

Student Financial Support: Research and teaching assistantships are available on a competitive basis to early applicants. Fellowships that supplement assistantship stipends are available to U.S. applicants with superior credentials. Award priority is given to Ph.D. and then to M.S. applicants.

Click on **Graduate Courses** for current course information.

NCSU Graduate Catalog

Integrated Manufacturing Systems Engineering

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Integrated Manufacturing Systems Engineering					Y		

GRADUATE FACULTY

Directors of Graduate Programs:

S. D. Jackson, Box 7915, 919/515-3808, <u>sdjackso@ncsu.edu</u>, Integrated Manufacturing Systems Engineering

S. G. Allen, Box 8114, 919/515-5584, steve_allen@ncsu.edu, Business Management

Named Professors: R. L. Barker, M. D. Boyette, R. E. King, R. A. Wysk; Named Distinguished University Professors: R. B. Handfield, T. J. Hodgson, M. Rappa; Distinguished Professors: O. A. Harrysson; Professors: G. D. Buckner, Y. A. Chen, M. Chow, T. G. Clapp, E. C. Dickey, Y. Fathi, T. K. Ghosh, J. S. Ivy, W. J. Jasper, J. A. Joines, J. W. Leach, Y. Lee, T. J. Little, L. A. Martin, W. J. Rasdorf, P. I. Ro, J. P. Rust, A. M. Seyam, J. R. Wilson; Research Professors: B. L. Edge, D. L. Lubkeman, T. M. Paskova; Adjunct Professors: M. Devetsikiotis, T. M. Paskova; Emeritus Named Professors: S. D. Roberts, C. F. Zorowski; Emeritus Professors: R. E. Carawan, P. L. Grady, T. Johnson, W. A. Smith, R. E. Young, C. F. Zorowski; Emeritus Distinguished Professors: C. T. Culbreth Jr; Associate Professors: D. R. Bahler, P. Banks-Lee, K. A. Barletta, R. R. Collazo, J. Dong, G. L. Hodge, H. Huang, M. G. Kay, N. Lu, K. Mitchell, D. E. Saloni, D. P. Warsing; Research Associate Professors: J. Taheri; Adjunct Associate Professors: J. J. Adams; Research Associate Professors: T. J. Horn; Adjunct Assistant Professors: S. S. Ahiska; Teaching Professors: S. D. Jackson, H. L. Nuttle, C. L. Reynolds Jr

The Integrated Manufacturing Systems Engineering (IMSE) Institute was established in 1984. IMSE provides multidisciplinary graduate-level education and practical training opportunities in the theory and practice of integrated manufacturing systems engineering at the masters level. IMSE focuses on providing a manufacturing presence and a program environment in the College of Engineering where faculty, graduate students and industry can engage cooperatively in multidisciplinary graduate education, basic and applied research, and technology transfer in areas of common interest related to modern manufacturing systems technology. The objective of the IMSE program is to offer students with traditional discipline backgrounds in engineering and the physical sciences an opportunity to broaden their understanding of the multidisciplinary area of manufacturing systems. Core areas of concentration are offered in manufacturing systems, logistics, mechatronics, and biomanufacturing.

Admission Requirements: Admission to the IMSE master's program requires a B.S. degree from an accredited institution in engineering, physics, mathematics, or computer science. Check with the Institute if your degree is in a field other than these listed.

Master's Degree Requirements: The IMSE program requires a minimum of 27 hours of

graduate course work and six hours of research project. The graduate course work includes five required core courses that provide a multidisciplinary overview of subject materials basic to manufacturing systems, logistics, mechatronics, and biomanufacturing. Specialization is provided in the student's elective courses. The six hours of research project is performed either individually or in teams in areas that compliment and reinforce the graduate course work.

The IMSE degree is now available through Engineering Online as a distance program. Application to the IMSE Distance Education program is the same as the on-campus program: www2.acs.ncsu.edu/grad/applygrad.htm. More information is available via the IMSE Institute (nkevans@ncsu.edu, 919-515-3808).

Student Financial Support: Assistantships, fellowships and internships are available to qualified students. The full financial support package covers tuition and health insurance.

Fellowship/Internship: The IMSE internship program was established to provide a cooperative industrial and academic experience for some IMSE students and our industrial sponsors. Several Fellowship/Internships awards are made available every year for special training in IMSE member companies. Students who are selected to participate in the internship program receive financial support for four semesters and one summer. Typically, the student attends classes for two semesters (fall and spring), works at the sponsor company for the following summer and fall semester, and completes the IMSE course requirements the following spring semester. The student uses the experience at the sponsor company as the basis for their IMSE research project.

Other Relevant Information: The Institute is supported by an industrial affiliates group of member companies. They have included ABB, ABCO Automation, AIMS, Applied Materials, AT&T, Bayer, B/S/H, Biogen Idec, Bosch Tools, CDB Corporation, CP&L, Carver Machine Works, Castle Hill Technologies, Caterpillar, Closure Medical, Corning Cable Systems, CSX, Inc., Dupont, Elkay, Ford Motor, GE, GKN, IBM, Intel, John Deere Turf Care, Meadows Mills, Morganite, Nekton Technologies, Nortel, OdorSweep, Potters Industries, Rubbermaid, Rxmedic, Snap-on Incorporated, and Swift Water Industries. The Institute interacts with member companies through an Industry Advisory Board and internships.

Core areas of concentration are offered in manufacturing systems, logistics, mechatronics, and biomanufacturing.

I. Manufacturing Core (one from each area)

Area 1

CSC 510 Software Engineering CSC 742 Database Management Systems ISE(CSC,OR) 762 Computer Simulation Techniques ISE(CSC) 441 Introduction to Simulation ISE 719 CIM System Design

Area 2

MBA 520 Managerial Finance ISE 510 Applied Engineering Economy ISE 711 Capital Investment Economic Analysis

Area 3

ISE 514 Manufacturing Product Engineering

ISE 707 Real-time Control of Automated Manufacturing

ISE 715 Manufacturing Process Engineering

ISE 716 Automated Systems Engineering

Area 4

ISE 723 Production Planning, Scheduling and Inventory Control

Area 5

MAE(WPS) 534 Mechatronic Design

MAE 742 Mechanical Design for Automated Assembly

II. Logistics Core (one from each area)

Area 1

CSC(ECE) 510 Software Engineering

CSC 742 Database Management

ISE(CSC,OR) 762 Computer Simulation Techniques

ISE 441 Introduction to Simulation

ISE 719 CIM Systems Design

Area 2

MBA 520 Managerial Finance

ISE 510 Applied Engineering Economy

ISE 711 Capital Investment Economic Analysis

Area 3

MBA 541 Supply Management

MBA 542 Supply Chain Logistics

Area 4

ISE 723 Production Planning, Scheduling and Inventory Control

Area 5

ISE 754 Logistics Engineering

III. Mechatronics Core (one from each area)

Area 1

MAE (WPS) 534 Mechatronic Design

ECE 556 Agent-Based Mechatronics Systems

Area 2

MAE 513 Principles of Structural Vibration

MAE(ECE) 535 Design of Electromechanical Systems

MAE 742 Mechanical Design for Automated Assembly

Area 3

ECE 511 Analog Electronics

ECE 555 Computer Control of Robots

ECE 755 Advanced Robotics

Area 4

CSC(ECE) 517 Object-oriented Languages and Systems ECE 561 Embedded Systems Design ECE 742 Artificial neural Networks ISE 719 CIM System Design

Area 5

ECE 437 Distribution Real-time Control Systems ECE 516 System Control Engineering ISE 707 Real-time Control of Automated Manufacturing ISE 716 Automated Systems Engineering

IV. Biomanufacturing Core (one from each area)

Area 1

ISE/OR/CSC 762 Computer Simulation ISE 719 CIM Systems Design

Area 2

MBA 520 Managerial Finance ISE 520 Applied Engineering Economy

Area 3

ISE 514 Manufacturing Product Engineering ISE 707 Real-Time Control of Automated Manufacturing

Area 4

ISE 723 Production Planning, Scheduling, and Inventory Control

Area 5

ISE 789 Quality Control in Biomanufacturing Applications TE 589 Six Sigma Quality

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Interdisciplinary Minor

The interdisciplinary minor requires two or more areas of coursework to be represented with a faculty member representing one of the areas of coursework. Students who are interested in an interdisciplinary minor should contact their Directors of Graduate Programs for more information.

International Studies

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
International Studies					Y		
Public Administration	Y				Y		

GRADUATE FACULTY

Directors of Graduate Programs:

- B. L. Nowell, Box 8102, 517/377-0932, blnowell@ncsu.edu, Political Science
- B. McDonald, Box 8102, bmcdona@ncsu.edu, Political Science
- C. E. Griffin, Box 8102, 919/515-5048, clifford griffin@ncsu.edu, Political Science
- J. D. Coggburn, Box 8102, 919/515-1888, jcoggburn@ncsu.edu, Political Science

Named Distinguished Professors: M. D. Schulman; Professors: T. A. Birkland, R. M. Clerkin, J. D. Coggburn, F. W. Cubbage, D. M. Daley, G. D. Garson, M. A. Johnson, A. F. Khater, J. Kuzma, A. W. Mitchell, B. L. Nowell, R. P. Patterson, M. A. Renkow, E. O. Sills, A. J. Taylor; Emeritus Professors: L. S. Bull, C. K. Coe, E. W. Erickson, R. L. Moxley, J. C. Shih, M. S. Soroos, M. A. Witt; Emeritus Distinguished Professors: S. W. Buol; Associate Professors: R. M. Berry-James, A. B. Bigelow, W. A. Boettcher, J. R. Brunet, C. Galik, C. E. Griffin, H. H. Hobbs, J. Kiwanuka-Tondo, R. C. Kochersberger, L. V. Kochtcheeva, B. McDonald, R. S. Moog, M. T. Nance, T. V. Reid, M. J. Struett, J. E. Swiss, J. M. Wallace, S. B. Wiley; Emeritus Associate Professors: L. D. Gustke, R. C. Kochersberger, R. J. Thomson, M. L. Vasu, S. T. Warren; Assistant Professors: J. A. Coupet, J. C. Diebold, M. Khisa, J. Liao, R. J. Reardon, A. J. Stewart; Teaching Assistant Professors: T. A. Appling, J. P. Crane-Seeber, D. Mitin, A. G. Solari, D. L. Weisel

The Master of International Studies (MIS) is a 36-hour, non-thesis professional degree program that prepares students for careers in government service, non-profit administration, international business, and international student services and study abroad. Located in the School of Public and International Affairs, the MIS degree draws upon faculty and courses from colleges and departments across the university. Approximately half of the course work for the degree is devoted to developing international knowledge and competencies. The remaining coursework is comprised of regional, topical, professional or technical specializations that are designed by students in consultation with their faculty advisors. The program has an excellent internship program that contributes to job placement upon graduation.

Admission Requirements: Applicants must provide GRE scores in addition to other application materials required by the Graduate School.

Degree Requirements: The requirements for the MIS degree are as follows:

- 1. 36 credit hours of course work;
- 2. Core Curriculum (15 hours). One course from each of the following five groups:

Group A - International Relations

Group B - Comparative Politics/Societies

Group C - International Law and Organization

Group D - International Economy/Development

Group E - Research Methods

- 3. Individualized specialization (12-15 hours). The specialization may be in a geographical region (e.g., Latin America, Middle East), an international topic (e.g., security, global governance, sustainable development), a professional field (e.g., public administration, non-profit management), or a technical specialty (e.g., Geographic Information System-GIS);
- 4. Capstone seminar (3 hours) and oral presentation of work to faculty and peers;
- 5. International experience or study abroad; and
- 6. Competency in a foreign language as determined by the Department of Foreign Languages and Literatures (FLL).

NCSU Graduate Catalog

Landscape Architecture

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Landscape Architecture					Y		

GRADUATE FACULTY

E. H. Bressler, *Department Head*

Directors of Graduate Programs:

C. F. Delcambre, Box 7701, 919/513-4320, <u>cfdelcam@ncsu.edu</u>, Landscape Architecture E. H. Bressler, Box 7701, 919/515-8342, <u>gene_bressler@ncsu.edu</u>, Landscape Architecture

Professors: R. F. Abrams, E. H. Bressler, M. E. Deming, D. B. Hill, R. C. Moore, A. R. Rice; Professors of the Practice: P. K. Kjaer, R. L. Swink; Emeritus Professors: H. A. Devine, M. J. Malecha, R. R. Wilkinson; Associate Professors: K. M. Boone, A. A. Fox, F. H. Magallanes, T. H. Shear, J. T. Sherk; Research Associate Professors: N. G. Cosco; Assistant Professors: C. Pasalar; Assistant Professors of the Practice: C. A. Flink; Teaching Assistant Professors: C. F. Delcambre

Course offerings or research facilities are available in the following areas: site planning and design, landscape history, urban public spaces, community design, regional design, resource management, outdoor learning environments, international urban and rural landscapes, and specialized landscapes.

Admission Requirements: The best-qualified applicants are accepted up to the maximum number of spaces that are available for new students. Exceptions to the minimum 3.00 GPA may be made for students with special backgrounds, abilities and interests.

Master's Degree Requirements.

I. Accredited First Professional Degree in Landscape Architecture: Candidates follow an 82-hour sequence of courses over a six-semester period. Three semesters of the program of study are determined by the required curriculum. The last three semesters of study are outlined by the student's Chair of the Department, Director of Graduate Programs, and/or advisor. Research and case studies lead to the final project and design application. The investigative direction is set in collaboration with the chair of the faculty committee. A formal presentation of findings to the faculty, student body and local professionals is required. The summary research and project report must be submitted to the College of Design faculty to meet the graduation requirements. II. Advanced Studies in Landscape Architecture: Candidates with an accredited undergraduate Landscape Architecture degree follow a 48-hour sequence of courses. Twenty-seven hours of electives are chosen through advising with the Director of Graduate Programs, advisors and faculty committee. Comprehensive research work is required for a final project with a final report is required. A formal presentation of findings to the faculty, student body and local professionals is also required.

Other Relevant Information: Students have the option of including a graduate minor in their course of studies. Minors can be in any other graduate program offered at NC State, UNC-CH and Duke University. Some examples of graduate minors are: natural resources, parks, recreation and tourism management, architecture, education, planning, civil engineering, and art and design. The College of Design includes the Center for Universal Design, the Office of Research, Extension & Engagement, and the Natural Learning Initiative.

Click on **Graduate Courses** for current course information.

NCSU Graduate Catalog

Liberal Studies

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
<u>Liberal Studies</u>				Y			

GRADUATE FACULTY

Director of Graduate Programs:

M. D. Garval, Box 8106, 919/260-1768, garval@ncsu.edu, Foreign Languages and Literatures

Distinguished Professors: A. H. Harrison; Professors: J. P. Braden, G. L. Comstock, M. D. Garval, J. K. Jameson, D. M. Marchi, S. C. Nassar, J. A. Pasten, R. P. Patterson, R. W. Slatta, K. S. Vincent, C. A. Warren, R. A. Waschka; Clinical Professors: B. L. Sherman; Emeritus Professors: C. K. Coe, D. H. Crumbley, M. L. Krotee, J. S. Lapp, L. H. MacKethan, C. R. Miller, M. H. Thuente; Associate Professors: K. I. Allen, A. O. Behnke, A. B. Bigelow, C. C. Brookins, J. R. Brunet, J. M. Casper, A. A. de Souza e Silva, S. L. Desmarais, M. B. Edwards, S. E. Garrigan, N. M. Haenn, K. A. Harwood, J. Kiwanuka-Tondo, R. S. Moog, D. M. Rieder, S. R. Stein, J. M. Wallace; Emeritus Associate Professors: P. F. Bitting, S. H. Kessler, R. E. Peterson, M. L. Vasu, S. T. Warren; Assistant Professors: C. D. Denson, J. Kertesz; Teaching Professors: G. D. Beckman, J. C. Kramer; Teaching Associate Professors: K. A. Bush, D. S. Murray; Teaching Assistant Professors: A. E. Arnold; Lecturers: A. E. Arnold

The Master of Arts in Liberal Studies (MALS) program is an interdisciplinary graduate program administered by the College of Humanities and Social Sciences. This is a broad, interdisciplinary program of part-time or full-time graduate study that integrates and expands the student's knowledge and awareness and that is geared to the student's personal interests. Each student, in consultation with an academic advisor, designs an individual program of study around an interdisciplinary theme or topic that is of intrinsic interest to the student or that relates to the student's professional or vocational interests. Students take graduate courses across a range of NC State departments as well as MALS seminars designed specifically for the program.

Admissions Requirements: Students entering the Master's program in liberal studies must have an undergraduate degree. In addition to the material required by the Graduate School, students applying are asked to submit a four to five page statement describing their objectives in doing a degree in liberal studies and a resume. GRE scores are not required. All applicants are interviewed.

Master's Degree Requirements: Thirty hours of course work made up of (1) three MALS seminars or two MALS seminars and a research methods course, (2) 18 hours representing the student's interdisciplinary theme or concentration, and (3) a three-hour culminating project. Examples of concentrations that are well supported by graduate courses in the NC State curriculum are: science, technology and society, the American experience and leadership.

Click on Graduate Courses for current Liberal Studies course information.

NCSU Graduate Catalog

Management

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Management					Y		

GRADUATE FACULTY

Director of Graduate Programs:

S. G. Allen, Box 8114, 919/515-5584, steve_allen@ncsu.edu, Business Management

Professors: S. G. Allen, D. H. Henard, S. K. Markham, D. P. Pagach; Professors of the Practice: L. Shamblin; Associate Professors: P. W. Mulvey; Emeritus Associate Professors: J. K. McCreery

The Jenkins Graduate School of Management, part of the North Carolina State University College of Management, in partnership with the Skema Business School in Paris, France, offers a Master's degree in Management as part of the Global Luxury and Management program. The curriculum is designed to give students with a range of backgrounds a strong exposure to core business management skills while providing in-depth exposure to the global luxury industry. It was designed specifically for students who are looking to create a personal competitive advantage for today's global luxury job market.

Students in the program come from around the world and classes will be held in both the United States and France. Students are taught by international professors who are leaders in their fields. Interactions with global luxury firms will occur both in the classroom and via internships.

Admission Requirements: Applicants are required to complete the standard NC State Graduate School application process. Applicant assessments will be done on an individual-by-individual basis. Concurrent acceptance activities will be at both Skema and NC State. GMAT or GRE scores are not required of applicants. International applicants must complete the TOEFL or IELTS.

U.S. applicants will need a valid U.S. passport and visa for traveling to France. Upon acceptance to the program, students can apply for a visa. Applicants should also be prepared for additional program costs (airfare to and from Europe and travels within Europe, lodging and meals while in France).

Master's Degree Requirements: The MM degree requires 33 credit hours and can be completed in one year. It does not require courses in subject areas such as economics and operations management which are required in the MBA. This one-year program awards two master degrees:(1) a degree from NC State University and (2) a degree from Skema Business School.

Core Courses:

MBA 564 Business Relationship Management

BUS 590 Analytic Decision Making

BUS 590 Business and Legal Ethics

BUS 590 Global Luxury Digital Marketing and Social Media

BUS 590 Global Luxury Leadership, Communication and Negotiation

BUS 590 Luxury Consulting with an Entrepreneurial Mindset

BUS 590 Luxury Consumer Behavior and Segmentation

BUS 590 Luxury Marketing Strategy

BUS 590 Supply Chain Management

Other Relevant Information: After two years of full-time work experience, qualified students who earn the dual master degree in Management are eligible to apply to the NC State MBA program. This would require an additional 30 hours of study. Students must complete a separate application to the MBA program.

NCSU Graduate Catalog

Marine, Earth and Atmospheric Sciences

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Climate Change and Society					Y		
Marine, Earth, and Atmospheric Sciences	Y		Y				

GRADUATE FACULTY

J. F. Levine, *Department Head*

Directors of Graduate Programs:

E. L. Leithold, Box 8208, 919/515-7282, <u>leithold@ncsu.edu</u>, Marine, Earth and Atmospheric Sciences

J. F. Levine, Box 8208, 919/513-6397, iflevine@ncsu.edu, Marine, Earth and Atmospheric

Sciences

V. P. Aneja, Box 8208, 919/515-7808, <u>viney_aneja@ncsu.edu</u>, Marine, Earth and Atmospheric Sciences

Named Distinguished Professors: J. M. Burkholder; Professors: V. P. Aneja, D. J. DeMaster, D. B. Eggleston, R. V. Fodor, D. P. Genereux, P. J. Harries, R. He, G. M. Lackmann, E. L. Leithold, J. F. Levine, D. A. McConnell, N. Meskhidze, H. Mitasova, M. D. Parker, W. A. Robinson, M. H. Schweitzer, W. J. Showers, M. K. Stoskopf, L. Xie, S. E. Yuter, Y. Zhang; Research Professors: O. B. Brown, J. C. Fountain, T. S. Hopkins, K. E. Kunkel, S. Rebach; Adjunct Professors: J. J. Bates, N. E. Blair, S. W. Chang, T. F. Clark, B. A. Colle, W. J. Cooper, R. P. Dziak, D. R. Easterling, P. Hamilton, A. F. Hanna, R. S. Harmon, D. E. Kingsmill, S. E. Koch, E. H. Koster, S. K. Leduc, N. S. Levine, J. M. Morrison, S. T. Rao, R. Rotunno, C. R. Smith, S. Yu, C. L. Ziegler, P. J. Ziemann; *Emeritus Professors:* S. S. Arya, H. S. Brown, B. J. Copeland, J. M. Davis, J. C. Fountain, J. P. Hibbard, D. Kamykowski, L. J. Langfelder, L. J. Pietrafesa, S. Raman, F. H. Semazzi, P. Shaw, C. W. Welby, E. A. Wheeler, T. G. Wolcott; Associate Professors: A. Aiyyer, D. R. Bohnenstiehl, J. Liu, C. L. Osburn, M. D. Petters, A. Schnetzer, K. W. Wegmann; Research Associate Professors: C. J. Thomas; Adjunct Associate Professors: G. B. Avery, S. Basu, M. A. Baxter, R. X. Black, R. P. Boyles, S. A. Braun, S. Bulusu, D. H. Doctor, B. S. Ferrier, J. C. Gosse, C. D. Harrington, Y. Hu, C. Jang, C. E. Konrad, B. Kosovic, J. Lin, J. J. Luczkovich, K. S. McNeal, R. D. Nair, C. Nelson, J. C. Reid, J. Rudek, J. C. Warner, S. N. White, R. W. Wiener; *Emeritus Associate Professors:* A. J. Riordan, E. F. Stoddard, D. L. Wolcott; Assistant Professors: C. A. Arendt, S. P. Bishop, P. K. Byrne, E. G. Hyland, R. W. Paerl; Research Assistant Professors: K. Wang; Emeritus Research Professors: D. A. Russell; Adjunct Assistant Professors: G. W. Bell, P. W. Belmont, M. Brennan, A. G. Carlton, J. J. Charney, D. R. Corbett, P. W. Curley, J. M. Dahl, S. H. Ensign, B. J. Etherton, S. Gasso, N. S. Hall, E. L. Hestir, A. L. Holder, G. J. Kirkpatrick, A. J. Lewitus, B. Liu, H. Liu, K. M. Mahoney, J. E. McNinch, D. B. Mechem, D. S. Niyogi, S. B. Phillips, B. J. Puckett, R. E. Reed, P. A. Roelle, B. Schaeffer, C. J. Schreck, G. A. Sinclair, R. C. Tacker, Q. Tong; *Teaching* Assistant Professors: L. Falk; Lecturers: B. K. Eder, J. T. Walker

Graduate programs are offered in atmospheric science, earth science, and marine science. Within marine sciences the subdisciplines of biological, chemical, geological and physical oceanography are recognized by the profession.

Admission Requirements: A bachelor's degree with research experience or a master's degree is required for entry into the Ph.D. program. A bachelor's degree in a science, mathematics or engineering is required for entry into the M.S. program in atmospheric science, earth science, and biological, chemical, geological or physical oceanography. Undergraduate field camp is required of all students in the M.S. program in earth science; this requirement may be fulfilled before or after admission. An M.S. degree with a non-thesis option for students is available and admission to this option must be requested at the time of application.

Master's Degree Requirements: The M.S. degree requires a minimum of 30 credit hours. Specific course requirements are determined by the advisory committee of each student.

However, MEA 601 Seminar is required of all thesis M.S. students no later than the third semester in residence. Marine science students are required to take core courses in two of the three subdisciplines other than their own.

Doctoral Degree Requirements: Specific courses are determined by the student's advisory committee. Registration in seminar, MEA 801, is required of all Ph.D. students no later than the fourth semester in residence. Marine science students are required to take core courses in all three subdisciplines other than their own; this requirement may be fulfilled at the M.S. level.

Student Financial Support: Research and teaching assistantships are available.

Other Relevant Information: Students are assigned initial advisors upon admission. It is the student's responsibility to secure the consent of a faculty member to serve as the permanent advisor who will chair or co-chair the advisory committee.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Materials Science and Engineering

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Nanoengineering					Y		

GRADUATE FACULTY

Director of Graduate Programs:

C. L. Reynolds Jr, Box 7907, 919/515-7622, lew_reynolds@ncsu.edu, Materials Science and Engineering

Named Professors: Y. T. Zhu; Named Distinguished Professors: D. W. Brenner, C. C. Koch, J. Narayan, Z. Sitar; Distinguished Professors: J. J. Cuomo, O. A. Harrysson, F. So; Professors: C. M. Balik, E. C. Dickey, N. A. El-Masry, A. Ivanisevic, J. L. Jones, T. H. LaBean, R. O. Scattergood, Y. G. Yingling, X. Zhang, Y. Zhu; Adjunct Professors: E. G. Loboa-Polefka, J. Schwartz; Associate Professors: L. Cao, R. R. Collazo, D. L. Irving, J. S. Jur, J. Kasichainula, J. M. LeBeau, J. B. Tracy, D. Vashaee; Assistant Professors: V. Augustyn, F. L. Hunte, T. M. Miller, S. Patala; Teaching Professors: C. L. Reynolds Jr; Teaching Associate Professors: C. P. Cass

Information coming soon.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Mathematics

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Applied Mathematics	Y		Y				
Mathematics	Y		Y				

GRADUATE FACULTY

A. E. Chertock, *Department Head*

Director of Graduate Programs:

P. A. Gremaud, Box 8205, 919/515-3085, gremaud@ncsu.edu, Mathematics

Named Professors: C. T. Kelley; Named Distinguished University Professors: H. T. Banks; *Professors:* J. D. Brown, S. L. Campbell, A. E. Chertock, M. T. Chu, L. Chung, J. D. Cohen, P. L. Combettes, R. O. Fulp, P. A. Gremaud, M. Haider, R. E. Hartwig, A. G. Helminck, P. L. Hersh, K. F. Hollebrands, H. Hong, I. Ipsen, K. Ito, N. Jing, E. L. Kaltofen, A. Kheyfets, Z. Li, X. Lin, A. L. Lloyd, S. R. Lubkin, R. H. Martin, N. G. Medhin, K. C. Misra, M. Olufsen, M. Paesler, M. S. Putcha, J. Rodriguez, M. Shearer, J. W. Silverstein, M. F. Singer, R. C. Smith, E. L. Stitzinger, S. M. Sullivant, H. T. Tran, S. V. Tsynkov, D. V. Zenkov; Adjunct Professors: J. T. Betts, O. J. Eslinger, M. V. Evans, S. P. Hamilton, C. L. Hughes, R. L. Ives, D. J. Lee, V. E. Manukian, J. T. Ottesen, R. P. Pawlowski, P. M. Schlosser, C. S. Woodward; *Emeritus* Professors: J. W. Bishir, R. E. Chandler, E. N. Chukwu, J. C. Dunn, J. E. Franke, R. O. Fulp, T. J. Lada, J. A. Marlin, C. Meyer, C. V. Pao, S. Schecter, J. F. Selgrade; Associate Professors: B. N. Bakalov, L. V. Bociu, S. Ghoshal, M. J. Kang, I. A. Kogan, L. K. Norris, T. Pang, S. Paur, N. P. Reading, A. Szanto; Adjunct Associate Professors: R. W. Ellson; Emeritus Associate Professors: G. D. Faulkner, D. E. Garoutte, L. B. Page, J. S. Scroggs, R. Silber, D. F. Ullrich; Assistant Professors: A. Alexanderian, K. B. Flores, R. Ke, T. Lidman, R. I. Liu, T. Nguyen, D. Papp, A. Saibaba, R. Sazdanovic, C. L. Vinzant; Adjunct Assistant Professors: K. S. Berenhaut, S. Bhattacharya, W. Chen, P. Drineas, J. D. Hauenstein, S. E. Howington, D. A. Knoll, A. Mahdi, J. E. Massad, J. L. Matthews, A. Mokhtari, V. Novak, Q. Zhang; *Teaching Associate* Professors: A. N. Duca, M. A. Fenn, J. R. Griggs; Teaching Assistant Professors: A. A. Cooper, B. L. Maultsby, B. B. Williams; Lecturers: W. Chen, T. J. Lada

The Department of Mathematics offers programs leading to the degrees of Master of Science and Doctor of Philosophy in mathematics and in applied mathematics. Students may opt for the concentration in computational mathematics, which is attached to the program in applied mathematics. The Concentration in Interdisciplinary Mathematics (MAI) is available to Ph.D. students in either Mathematics or Applied Mathematics. It is not available to Masters Students. Joint research endeavors with industrial and governmental partners are facilitated and encouraged. The Department of Mathematics also offers a Certificate.

Admissions Requirements: Applicants for admission should have an undergraduate or Master's degree in mathematics or equivalent. This should include courses in advanced calculus, modern algebra and linear algebra. Applicants with degrees in other subjects may be admitted but may be required to take certain undergraduate courses in mathematics without receiving graduate credit. GRE general scores are required. The GRE Subject Test in Mathematics is not required but a good score can be a positive factor in admission.

Master of Science Requirements: The M.S. degree requires a minimum of 30 credit hours. In addition to course requirements (27 credit hours), the M.S. degree requires a written Master's project for 3 hours credit.

Ph.D. Requirements: The Ph.D. requires a minimum of 72 credit hours. A student will typically take 50-60 semester hours of course credits for the Ph.D. These courses include one semester of modern algebra and one semester of mathematical analysis. The written preliminary examination consists of examinations in three areas of mathematics chosen by the student from 14 possibilities. The research dissertation should represent a substantial contribution to an area of mathematics or its applications.

Student Financial Support: Teaching assistantships and some research assistantships are available. Teaching assistants benefit from a structured program of training in university-level teaching.

Other Information: The Department of Mathematics has a large number of workstations devoted exclusively to its graduate students.

Click on **Graduate Courses** for current course information.

NCSU Graduate Catalog

Mechanical and Aerospace Engineering

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA	
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Aerospace Engineering	Y	Y		
Mechanical Engineering	Y	Y		

GRADUATE FACULTY

S. V. Ekkad, Department Head

Director of Graduate Programs:

K. J. Peters, Box 7910, 919/515-2365, <u>kjpeters@ncsu.edu</u>, Mechanical and Aerospace Engineering

Named Professors: S. V. Ekkad, F. Yuan, Y. T. Zhu, M. A. Zikry; Named Distinguished University Professors: T. A. Dow; Distinguished Professors: O. A. Harrysson; Professors: G. D. Buckner, T. Echekki, J. R. Edwards, T. Fang, A. Gopalarathnam, R. D. Gould, E. Grant, P. A. Gremaud, H. A. Hassan, X. Jiang, R. F. Keltie, C. Kleinstreuer, A. V. Kuznetsov, J. W. Leach, H. Luo, K. M. Lyons, G. Ngaile, K. J. Peters, A. Rabiei, P. I. Ro, R. O. Scattergood, L. M. Silverberg, J. S. Strenkowski, J. F. Tu, F. Wu, Y. Zhu; Adjunct Professors: C. S. Kim, M. Reyhanoglu, W. L. Roberts; Emeritus Named Professors: C. F. Zorowski; Emeritus Professors: J. A. Bailey, H. M. Eckerlin, F. J. Hale, F. D. Hart, H. A. Hassan, T. H. Hodgson, R. R. Johnson, D. S. McRae, J. C. Mulligan, R. T. Nagel, L. H. Royster, F. Y. Sorrell, C. F. Zorowski; Associate Professors: M. A. Boles, C. Chang, J. W. Eischen, S. M. Ferguson, C. E. Hall, H. Huang, Y. Jing, A. P. Mazzoleni, B. T. O'Connor, K. Saul, A. V. Saveliev; Assistant Professors: M. Bryant, L. Grace, K. Granlund, J. Liu, M. Muller, V. Narayanaswamy, M. R. Pankow, P. K. Subbareddy; Research Assistant Professors: S. D. Terry; Adjunct Assistant Professors: J. A. Cooke; Teaching Professors: R. R. Johnson; Teaching Associate Professors: P. B. Corson, C. M. Tran; Teaching Assistant Professors: S. E. Hollar

The *Mechanical Engineering* graduate program prepares students in all aspects of mechanical and thermal systems design and manufacturing. Course offerings and research programs for mechanical engineering students are available in applied mechanics; biomechanics; combustion; design and manufacturing: dynamic systems and control; energy conversion and systems; experimental mechanics; fluid dynamics; heat transfer; mechanics of materials; micro, nano and MEMS; and vibration and acoustics. Sub-areas include adaptive and auto adaptive structures, controls and system identification, CFD, energy conversion and renewable energy, materials processing and tribology, mechatronics, precision engineering, and reactive and multiphase flows.

Graduate students in the *Aerospace Engineering* program focus on aircraft and space systems design, analysis, and manufacturing. Students can select course offerings and research programs in aerodynamics and applied aerodynamics; aerospace propulsion; computational fluid dynamics; dynamics and design of spacecraft and space systems; flight dynamics and control;

and multifunctional materials and smart structures. Sub-areas include acoustics, aeroelasticity, atomization, sprays, composite materials, reactive and multiphase flows, stability, and transition to turbulence.

Admission Requirements: An applicant to the master's program must be a graduate of an accredited undergraduate program with a B.S. degree in either mechanical or aerospace engineering. Graduates of other accredited programs in engineering, physical sciences and mathematics may be considered but will be required to make up undergraduate deficiencies without graduate credit. Provisional admissions, as well as exceptions, are sometimes granted under special circumstances. The most qualified applicants are accepted first. Applicants to the Ph.D. program must have met the M.S. admission requirements and additionally must satisfy the Ph.D. admissions requirements.

Master's Degree Requirements: The thesis-option M.S. degree programs in mechanical engineering and aerospace engineering require 21 hours of course credit and nine hours of thesis research. The non-thesis M.S. degree programs in mechanical engineering and aerospace engineering require 27 hours of course credit and a three credit-hour project. The non-thesis M.S. degree programs in mechanical engineering and aerospace engineering are offered on campus and off campus through distance education.

Ph.D. Degree Requirements: A minimum of 72 hours of credit are required to obtain the Ph.D. degree. A direct path to the Ph.D. from the B.S. is also available with which the student is granted the M.S. degree "enroute" to the Ph.D. The enroute Ph.D. (direct to Ph.D. path) requires a minimum of 3.5 undergraduate GPA.

Student Financial Support: Various types of assistantships and fellowships are available. Awards are made to the most qualified applicants first and generally are not available for all students.

Other Relevant Information: Each new student chooses an area of specialty, selects an advisor and committee, customizes a program of study and begins research in the first semester of residence. The Director of Graduate Programs acts as a temporary advisor initially and should be contacted with questions.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Microbial Biotechnology

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Microbial Biotechnology					Y		

GRADUATE FACULTY

Director of Graduate Programs:

E. S. Miller, Box 7615, 919/513-1368, eric_miller@ncsu.edu, Plant and Microbial Biology

Professors: M. Hyman, E. S. Miller; Adjunct Professors: D. van der Lelie; Associate

Professors: S. B. Carson, P. T. Hamilton

The Master of Microbial Biotechnology Program (MMB) is recognized by the <u>Council of Graduate Schools</u> as a <u>Professional Science Master's degree</u> (PSM). The MMB degree combines training in Microbiology, Business and Biotechnology. This degree is specifically designed to prepare students for positions in the biotechnology, biopharmaceutical and agrobusiness industries. The program includes courses that involve semester-long interactions with local biotechnology companies as well as foundational courses in microbiology, business management and molecular biology.

Admission Requirements: Applications are invited from individuals holding B.S. or M.S. degrees in the physical and life sciences. Applications should be received before May 1 to be considered for Fall semester admission. The Graduate Record Exam (GRE) is required and should be taken sufficiently early so that scores can be submitted and evaluated along with the application. Other requirements include all relevant transcripts, three letters of recommendation and a personal statement that describes the applicant's career goals as well as why they are pursuing the MMB degree.

Master's Degree Requirements: The Master of Microbial Biotechnology (MMB) degree requires 40 credit hours, including four semesters involvement in an Industry Case Studies course, as well as a summer industry internship. This program also can be combined with a Master of Business Administration (MBA) offered through the College of Management.

Student Financial Support: A limited number of full-time participants in the Master of Microbial Biotechnology program may be eligible for Teaching Assistantships. The number of TA positions available varies every semester and there are no guaranteed positions. Students in the MMB program should assume that they will self-fund their education.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Microbiology

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Microbiology	Y		Y		Y		

GRADUATE FACULTY

Director of Graduate Programs:

E. S. Miller, Box 7615, 919/513-1368, eric_miller@ncsu.edu, Plant and Microbial Biology

Named Professors: R. R. Dunn, A. M. Grunden, L. Jaykus, R. M. Kelly; Professors: P. Arasu, D. T. Brown, J. W. Brown, M. S. Chinn, M. A. Cubeta, F. De Los Reyes, M. C. Flickinger, F. J. Fuller, H. M. Hassan, S. Hu, M. Hyman, S. Kathariou, S. M. Laster, H. Liu, J. M. Mackenzie, C. C. Melander, E. S. Miller, I. T. Petty, B. Sherry; USDA Professors: F. Breidt; Adjunct Professors: D. van der Lelie; Emeritus Professors: W. J. Dobrogosz, G. H. Elkan, W. E. Kloos, G. Luginbuhl, P. E. Orndorff, L. W. Parks, J. C. Shih; Emeritus Named Distinguished University Professors: T. R. Klaenhammer; Associate Professors: R. Barrangou, C. Beisel, J. M. Bruno-Barcena, S. B. Carson, R. A. Ghiladi, P. T. Hamilton, M. E. Jacob, M. D. Koci, C. Lanzas, J. W. Olson, F. Scholle, M. L. Sikes, S. Thakur, G. J. Williams, J. A. Yoder; USDA Associate Professors: R. G. Upchurch; Emeritus USDA Professors: P. E. Bishop; Adjunct Associate Professors: W. M. Casey, J. M. Ligon, S. H. Shore; Assistant Professors: J. R. Elfenbein, J. E. Fogle, E. Gutierrez Rodriguez, M. Kleiner, J. G. Pierce, C. M. Theriot; USDA Assistant Professors: I. M. Perez Diaz; Adjunct Assistant Professors: J. L. Stephenson; Teaching Assistant Professors: C. C. Goller, M. E. Taveirne

Microbiology is an integral part of the life science and biotechnology disciplines across the North Carolina State University campus. The Microbiology Graduate Program involves research and education in laboratories and departments that form inter-disciplinary teams to address critical, global challenges for science and society. The MGP (http://harvest.cals.ncsu.edu/microbiology/) offers courses of study and research leading to the Ph.D., M.S., Master of Microbiology (M.M.) and Master of Microbial Biotechnology (M.M.B.) degrees.

The research-based degrees (M.S and Ph.D.) offered by the program are designed to prepare students for careers in academic, industrial or research institute settings. Course offerings for Microbiology research students focus on microbial genetics and physiology, bioprocessing and fermentation, biotechnology, virology, immunology and host-pathogen interactions. Research throughout the program is diverse, emphasizing most areas where microbes, viruses and systems biology have relevance to basic science and biotechnology. Research opportunities for students involve many areas of specialization including biofuels, bioremediation, environmental microbiology, antibiotic resistance, extremophiles, bacterial pathogens, probiotics, developmental epigenetics, bacteriophages, inflammation modulation and viral pathogenesis; the list is long and broad. Financial support for study towards Ph.D. and M.S. degrees is limited, but can be available in the form of teaching/research assistantships and competitive fellowships.

The non-research-based Masters of Microbial Biotechnology (MMB) is a Professional Science Masters degree that combines concentrations in Microbiology, Business and Biotechnology. This degree is specifically designed to prepare students for positions in the biotechnology, biopharmaceutical and agrobusiness industries. The program includes courses that involve semester-long interactions with local biotechnology companies as well as foundational courses in microbiology, business management and molecular biology. The M.M. degree is a rigorous nonthesis degree that is designed for students who want a higher degree in microbiology but do not want to conduct research or are unable to commit to the time demands of a research degree. Many students in the M.M. program either work for local employers or are interested in subsequent applications to professional schools. Financial support is extremely limited for either M.M.B or M. M. students.

Admission Requirements: Applications are invited from individuals holding B.S. or M.S. degrees in the physical and life sciences. Applications should be received in the department before January 15 to be considered for Fall semester admission. The Graduate Record Exam (GRE) is required and should be taken sufficiently early so that scores can be submitted and evaluated along with the application. Other requirements include all relevant transcripts, three letters of recommendation and a personal statement that describes the applicant's academic and career goals as well as their area of interest.

Master's Degree Requirements: The Master of Science (M.S.) requires 30 credit hours, of which 18 must be graded, a written thesis and at least one semester of laboratory teaching experience. The Master of Microbial Biotechnology (M.M.B.; http://harvest.cals.ncsu.edu/master-of-microbial-biotechnology/mmb/) degree requires 40 credit hours and four semesters involvement in an Industry Case Studies course, as well as a summer industry internship. This program also can be combined with a Master of Business Administration (M.B.A.) offered through the College of Management. The Master of Microbiology (M.M.) requires 30 credit hours, of which 18 must be graded, but has no requirement for a written thesis or laboratory instruction).

Doctoral Degree Requirements: The Ph.D. program

(http://harvest.cals.ncsu.edu/microbiology/) is designed for individuals desiring to pursue careers in research and/or teaching. Prospective Ph.D. and M.S. students should become aware of departmental research programs and faculty so that an area of specialization is indicated in the application materials (personal statement). A faculty dissertation advisor and laboratory research program are confirmed at admission or by the end of the first semester. In conjunction with the advisor, the student establishes a four-member faculty advisory committee to guide the research and academic program. At least one semester of teaching assistance / experience is required. A preliminary examination is held soon after completing the second year of study, and the final examination includes a seminar presented by the candidate that is open to the university community.

Student Financial Support: All Ph.D. and M.S. applications to the Microbiology Graduate Program are considered for available assistantships. For highly qualified students, supplemental funds are frequently available. There is limited funding available for international students given the structure of the NC State University Graduate Student Support Plan.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Multidisciplinary Studies

GRADUATE COURSES

MDS 515 Peruvian Amazon Ecology and Ethnology MDS 595 Special Topics in Multidisciplinary Studies MDS 610 Special Topics MDS 685 Master's Supervised Teaching

Natural Resources

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Natural Resources			Y		Y		

GRADUATE FACULTY

Directors of Graduate Programs:

E. H. Bressler, Box 7701, 919/515-8342, <u>gene_bressler@ncsu.edu</u>, Landscape Architecture T. H. Shear, Box 8008, 919/515-7794, <u>ted_shear@ncsu.edu</u>, Forestry and Environmental Resources

T. J. Smyth, Box 7620, 919/515-2838, jot smyth@ncsu.edu, Crop and Soil Sciences Y. Leung, Box 7106, 919/513-3489, leung@ncsu.edu, Parks, Recreation and Tourism Management

Named Professors: R. C. Abt; Named Distinguished Professors: M. J. Vepraskas; Professors: A. Amoozegar, J. N. Bocarro, F. W. Cubbage, M. F. Floyd, D. J. Frederick, B. Goldfarb, J. L. Havlin, G. R. Hess, F. Isik, S. Khorram, Y. Leung, R. K. Meentemeyer, S. C. Nelson, E. G. Nichols, M. N. Peterson, J. P. Roise, R. M. Scheller, C. D. Siderelis, E. O. Sills, T. J. Smyth; Adjunct Professors: T. A. Steelman, J. M. Vose; Emeritus Professors: K. A. Henderson, H. J. Kleiss, M. G. Wagger, W. E. Winner; Associate Professors: C. E. Barbieri, G. B. Blank, K. M. Boone, G. L. Brothers, J. A. Delborne, M. B. Edwards, R. E. Emanuel, A. A. Fox, C. Galik, D. W. Hazel, M. V. Katti, F. H. Magallanes, D. B. Morais, E. L. Seekamp, T. H. Shear, C. G. Vick; Emeritus Associate Professors: R. L. Moore, S. T. Warren; Assistant Professors: M. L. Ardon Sayao, R. L. Cook, B. B. Cutts, J. A. Forrester, J. M. Gray, L. R. Larson, Z. H. Leggett, K. Martin, L. Rivers, K. T. Stevenson; Adjunct Assistant Professors: M. Addor, J. W. Smith;

The natural resources program is an interdepartmental program designed to prepare students for positions in both private and public natural resource organizations. A selection of technical options couple core courses in natural resources issues and management with a series of related courses in a variety of related technical disciplines. The purpose of the natural resources core curriculum is to educate professionals at a Master's level who are well-versed in policy and regulation and who have skills in quantitative assessments. Currently approved technical options include: assessment and analysis, ecological restoration, economics and management, policy and administration, international resources, hydrology, and geographic information systems in the Department of Forestry and Environmental Resources; outdoor recreation management in the Department of Parks, Recreation and Tourism Management; and landscape architecture in the Department of Landscape Architecture. Each option is available as either the M.S. in NR or as the non-thesis Master of NR.

Admissions Requirements: Students should have an undergraduate degree in natural resources or a related field. Experience in natural resources management and administration will be considered in lieu of an appropriate undergraduate degree. Admission is contingent upon meeting departmental requirements and acceptance by an advisor.

Master's Requirements: The M.S. degree requires a research thesis based on completion of a research project. The Master of NR degree requires a practical project which develops and demonstrates problem-solving skills. Students enrolled in the Department of Forestry and Environmental Resources must take FOR 603 in the first or second semester. The minimum number of credit hours varies by technical option, but is generally 36 credit hours including research or project credits and core courses.

Core Courses (10 credit hours)

NR 500 Natural Resource Management NR 571 Current Issues in Natural Resource Policy ST 5** Graduate-level statistics course Departmental seminar

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Nuclear Engineering

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
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Nuclear Engineering	Y	Y	Y	

GRADUATE FACULTY

K. N. Ivanov, Department Head

Director of Graduate Programs:

K. L. Murty, Box 7909, 919/515-3657, murty@ncsu.edu, Nuclear Engineering

Distinguished Professors: Y. Y. Azmy, D. Kropaczek; Distinguished University Professors: J. G. Gilligan; Professors: B. Bhattacharyya, M. A. Bourham, N. T. Dinh, J. M. Doster, R. P. Gardner, A. Gupta, T. Hassan, A. I. Hawari, K. N. Ivanov, K. L. Murty, P. J. Turinsky; Research Professors: B. W. Wehring; Adjunct Professors: S. M. Bragg-Sitton, R. R. Pemper, G. Tryggvason, R. W. Youngblood; Emeritus Professors: D. J. Dudziak, V. C. Matzen, K. Verghese; Associate Professors: D. Y. Anistratov, M. N. Avramova, I. A. Bolotnov, J. Eapen, R. B. Hayes, D. Kaoumi, J. K. Mattingly, S. C. Shannon; Adjunct Associate Professors: E. M. Brubaker, P. A. Hausladen, M. F. Simpson, M. H. Stokely; Assistant Professors: K. Stapelmann, G. Yang; Research Assistant Professors: J. Hou; Adjunct Assistant Professors: B. R. Grogan, J. Li, I. Meric, S. Schunert, L. G. Worrall; Teaching Associate Professors: S. P. Palmtag

The discipline of nuclear engineering is concerned with the development of nuclear processes for energy production and with the applications of radiation for the benefit of society. Representative topics of investigation include analytical, computational and experimental research in the neutronics, materials, thermal-hydraulics and control aspects of fission reactors; radiation detection and measurement of basic physics parameters; nuclear safety and security; applications of radioisotopes and radiation in industry, medicine and science; and plasma science, plasma engineering and design aspects of fusion reactors.

Admission Requirements: Bachelor's degree graduates in any of the fields of engineering or physical sciences may be qualified for successful advanced study in nuclear engineering. Prior experience or course work in nuclear physics, partial differential equations and basic reactor analysis is helpful but may be gained during the first year of graduate study. GRE scores (general test) are needed for on-campus graduate study.

Master's Degree Requirements: A total of 30 credit hours (at least nine semester hours of interdisciplinary breadth and 21 Nuclear Engineering) is required for both the M.S. and MNE degrees. An engineering project is required for the MNE degree and a formal thesis is required for the M.S. degree.

Doctoral Degree Requirements: A total of 72 credit hours which includes a minor (at least 12 hours) is required. Students must pass a departmental qualifying exam in three core areas of nuclear engineering, and they can (if they so choose and if their advisor approves) prepare for the

exam by enrolling during their first year in three corresponding graduate courses comprising radiation fundamentals, reactor engineering, and radiation detection. Students who already earned a masters degree may count some of their credits towards the required PhD hours; consult <grad manual posted online> for details.

Student Financial Support: Teaching assistantships, research assistantships, and fellowships are available for qualified applicants. Opportunities are also available for graduate traineeships with utility companies, reactor and fuel vendors, and national laboratories providing a valuable combination of financial support and learning in the classroom, the research laboratory and on the job.

Other Relevant Information: The department has many excellent facilities including the one-megawatt PULSTAR fission reactor (soon to be uprated to 2MW), ultra cold neutron source, intense low-energy positron source, neutron scattering facility, neutron radiography unit, neutron activation analysis laboratory, nuclear materials laboratory, plasma laboratories, instrumentation and controls equipment, radiation analyzers and tomography systems, Generic PWR simulator and access to extensive computer facilities ranging from workstations to a supercomputer.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Nutrition

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Nutrition	Y		Y		Y		

GRADUATE FACULTY

Directors of Graduate Programs:

- J. C. Allen, Box 7624, 919/513-2257, jon_allen@ncsu.edu, Food, Bioprocessing, and Nutrition Sciences
- L. S. Goodell, Box 7624, <u>lsgoodel@ncsu.edu</u>, Food, Bioprocessing, and Nutrition Sciences

Named Distinguished Professors: J. T. Brake, P. R. Ferket, J. Odle; Distinguished Professors: M. Lila; Professors: J. C. Allen, K. E. Anderson, S. L. Ash, C. Dunn, J. Eisemann, V. Fellner, M. G. Ferruzzi, J. L. Grimes, S. Kathariou, S. W. Kim, J. A. Knopp, J. A. Moore, P. E. Mozdziak, E. O. Oviedo-Rondon, M. H. Poore, P. D. Siciliano, R. C. Smart, E. VanHeugten; USDA Professors: V. D. Truong; Adjunct Professors: E. A. Koutsos; Emeritus Professors: B. P. Alston-Mills, L. W. Aurand, L. C. Boyd, L. S. Bull, E. V. Caruolo, G. L. Catignani, W. J. Croom, J. D. Garlich, W. M. Hagler, R. W. Harvey, W. L. Johnson, J. R. Jones, C. J. Lackey, J. Luginbuhl, J. W. McClelland, S. J. Schwartz, J. C. Shih, L. W. Whitlow; Emeritus

Distinguished Professors: H. E. Swaisgood; Associate Professors: L. S. Goodell, G. K. Harris, C. D. Kay, M. D. Koci, S. Komarnytsky, C. Maltecca, S. E. Phillips; Adjunct Associate Professors: R. J. Harrell, C. R. Stark, O. T. Toomer; Assistant Professors: A. Fogleman, M. Iorizzo, K. A. Livingston, C. L. Pickworth, C. D. Stevenson; USDA Assistant Professors: O. T. Toomer; Adjunct Assistant Professors: S. Sang; Teaching Associate Professors: C. V. Jordan; Teaching Assistant Professors: K. D. Ange-Van Heugten

The Interdepartmental Nutrition Program consists of faculty from four departments: Animal Science; Agricultural and Human Sciences; Food, Bioprocessing, and Nutrition Sciences; and the Prestage Department of Poultry Science. Students reside and conduct research in one of these departments under the direction of an appropriate advisor. Research in the nutrition program may be conducted with a variety of species and at various levels, such as molecular, cell, whole animal, and human communities. Research programs are primarily in the area of nutritional biochemistry, experimental animal nutrition (e.g. horses, ruminants, swine, poultry, rodents, and other species), or community nutrition and public health. Graduates find employment in academia, government, industry, and non-profit organizations, or continue their education in medical and allied health fields.

Admission Requirement: To be considered for admission, a student should have a B.S. or M.S degree in a science-related area, including course work in biology and organic chemistry. Students for M.S. or Ph.D. should contact and be recommended by a prospective major faculty advisor in their area of interest prior to final admission. Applicants to the Master of Nutrition should indicate their preferences for: on-campus or Distance Education delivery; an emphasis in animal, poultry, or food science (human) nutrition; core science or Professional Science Masters (PSM); and within the PSM, Feed Science or Human Nutrition, Food and Bioprocessing.

Master's Degree Requirements: A minimum of 24 course credit hours and a thesis is required for M.S., 36 for Master of Nutrition. The Master of Nutrition has options for all course delivery by Distance Education, with emphases in Feed Science or Human Nutrition, and an option for course work that qualifies as a Professional Science Master's degree.

Student Financial Support: Assistantships and fellowships may be available for M.S. and Ph.D. students on a competitive basis from the departments in which the advisor resides. Admission does not guarantee availability of financial support.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Operations Research

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Operations Research	Y		Y		Y		

GRADUATE FACULTY

Director of Graduate Programs:

M. G. Kay, Box 7906, 919/515-2008, kay@ncsu.edu, Industrial Engineering

Named Professors: S. Fang, C. T. Kelley, R. E. King; Named Distinguished Professors: H. S. Heese, R. Uzsov, Z. Zeng; Named Distinguished University Professors: R. B. Handfield, T. J. Hodgson, M. Rappa; Distinguished Professors: J. L. Swann, M. A. Vouk; Named Distinguished Professor: M. Liu; Professors: J. W. Baugh, B. Bhattacharyya, E. D. Brill, S. L. Campbell, Y. Fathi, R. E. Hartwig, P. L. Hersh, I. Ipsen, K. Ito, J. S. Ivy, J. A. Joines, Z. Li, G. F. List, L. A. Martin, M. E. Mayorga, N. G. Medhin, A. Nilsson, H. G. Perros, S. Ranjithan, J. P. Roise, G. Rouskas, N. F. Samatova, C. D. Savage, M. P. Singh, R. C. Smith, M. F. Stallmann, W. J. Stewart, H. T. Tran, I. Viniotis, W. Wang, J. R. Wilson, F. Wu, D. V. Zenkov; Research Professors: B. L. Edge, D. L. Lubkeman; Adjunct Professors: J. T. Betts, M. Devetsikiotis, S. M. Hsiang; Emeritus Named Professors: S. D. Roberts, M. W. Suh; Emeritus Professors: R. H. Bernhard, J. W. Bishir, P. Bloomfield, J. C. Dunn, H. J. Gold, D. M. Holthausen, D. F. McAllister, C. Meyer, K. H. Pollock, J. R. Stone, R. E. Young; Associate Professors: K. A. Barletta, R. Y. Chirkova, J. F. DeCarolis, S. Ghoshal, M. J. Kang, M. G. Kay, E. Kemahlioglu-Ziya, Y. Liu, N. Lu, T. Pang, T. W. Reiland, C. E. Smith, D. P. Warsing; Research Associate Professors: J. Taheri; Adjunct Associate Professors: B. Denton, T. Yu; Emeritus Associate Professors: T. L. Honeycutt, J. S. Scroggs; Assistant Professors: J. J. Adams, O. Y. Ozaltin, D. Papp; Adjunct Assistant Professors: A. R. de Queiroz; Teaching Professors: H. L. Nuttle

Operations Research (OR) is a graduate program of an interdisciplinary nature, governed by an administrative board and the program committee, and administered through the office of the program director.

Admission Requirements: Applications are accepted from undergraduate majors in all technical disciplines. Applicants should have had at least four math courses beyond calculus (e.g., courses in differential equations, linear algebra, probability and statistics, and mathematical analysis). Knowledge of a computer programming language is recommended, but not required. GRE scores are required of all new applicants.

Master's Degree Requirements: The Master of Operations Research degree is a terminal graduate degree for students who seek careers as OR practitioners in either the private or public sector. The M.S. degree is designed to prepare students for careers in research and development.

Doctoral Degree Requirements: The Ph.D. degree is intended for students to be research scientists in industry or teachers and researchers in academia. This degree requires a minimum of

72 hours of graduate credit beyond the bachelor's degree, including coursework in major and minor areas of concentration together with credit for doctoral research and dissertation preparation. A departmental written qualifying examination is required. For students who have completed a Master's degree from another institution prior to joining the Ph.D. program, a minimum of 54 hours of additional graduate credit are required. Please consult the Operations Research website for more details of degree requirements.

Student Financial Support: Both teaching and research assistantships are available to qualified applicants. Award priority is given to Ph.D. then M.S. applicants. Outstanding students who are U.S. citizens and who shall be enrolled in the NC State Graduate School for the first time are eligible for the Engineering Dean's Graduate Fellowship Program.

Click on Graduate Courses for current course information.

Suggested Cognate Courses: Cognate courses are courses that are often included in OR programs of study, but which carry other departmental designations. They cover subject matter closely related to OR and provide additional insight into the theory or application of OR methodology. Students may include cognate courses in their programs of study without the consent of their faculty advisor. Students can take other non-cognate courses in their programs of study with the consent of their faculty advisor.

Biomathematics

BMA/MA/ST 771, 772 Biomathematics I & II

Chemical Engineering

CHE 525 Process System Analysis and Control

Civil Engineering

CE 775 Modeling and Analysis of Environmental Systems

Computer Science

CSC 505 Design and Analysis of Algorithms CSC/MA 580, 780 Numerical Analysis I & II CSC/ECE 779 Advanced Computer Performance Modeling

Electrical and Computer Engineering

ECE 716 Feedback Control Systems ECE 521 Computer Design and Technology

Economics

ECG/BUS 750 Economic Decision Theory ECG/ST 651 Econometrics ECG/ST 751 Econometric Methods

Industrial and Systems Engineering

ISE 553 Modeling and Analysis of Supply Chains

ISE 711 Capital Investment Economic Analysis

ISE 723 Production Planning, Scheduling, and Inventory Control

ISE 747 Reliability Engineering

ISE 748 Quality Engineering

ISE 754 Logistics Engineering

ISE 861 The Design of Production Systems

Mathematics

MA 523 Linear Transformations and Matrix Theory

MA 540 Uncertainty Quantification for Physical and Biological Models

MA 547 Financial Mathematics

MA 583 Introduction to Parallel Computing

MA 584 Numerical Solution of Partial Differential Equations - Finite Difference Methods

MA 587 Numerical Solution of Partial Differential Equations - Finite Element Methods

MA 715 Analysis II

MA 723 Theory of Matrices and Applications

MA 748 Stochastic Differential Equations

MA/ST 778, 779 Measure Theory and Advanced Probability

MA 790 Advanced Special Topics System Optimization - Introduction to Interacting Random Systems

MA 790 Advanced Special Topics System Optimization - Convex Optimization

MA 790 Advanced Special Topics System Optimization - Semidefinite Programming

MA 790 Advanced Special Topics System Optimization - Deterministic and Stochastic Control

Statistics

ST 515 Experimental Statistics for Engineers I

ST 516 Experimental Statistics for Engineers II

ST 730 Applied Time Series Analysis

ST 785 Introduction to Statistical Decision Theory

ST 782, ST 783 Time Series Analysis I & II

NCSU Graduate Catalog

Parks, Recreation and Tourism Management

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Parks, Recreation, and Tourism Management	Y		Y		Y		

GRADUATE FACULTY

M. F. Floyd, Department Head

Director of Graduate Programs:

Y. Leung, Box 7106, 919/513-3489, leung@ncsu.edu, Parks, Recreation and Tourism Management

Professors: J. N. Bocarro, M. F. Floyd, M. A. Kanters, Y. Leung, R. K. Meentemeyer, M. N. Peterson, C. D. Siderelis; Adjunct Professors: T. A. Steelman; Emeritus Professors: H. A. Devine, K. A. Henderson; Associate Professors: A. Attarian, C. E. Barbieri, G. L. Brothers, J. M. Casper, M. B. Edwards, J. A. Hipp, D. B. Morais, E. L. Seekamp, C. G. Vick; Emeritus Associate Professors: L. D. Gustke, R. L. Moore; Assistant Professors: K. S. Bunds, B. B. Cutts, W. G. Knollenberg, L. R. Larson, K. Lee, K. T. Stevenson, J. Vukomanovic; Adjunct Assistant Professors: S. A. Rich, J. W. Smith; Teaching Associate Professors: K. A. Bush, E. K. Lindsay; Teaching Assistant Professors: L. G. Tateosian, R. W. Wade

The Doctoral degree allows students to match their particular research interests and career aspirations with departmental research activities and faculty expertise. The primary areas of interest for students include health and well-being, human dimensions of the natural and built environment, sustainable and equitable tourism, and geospatial methods and modelling with a substantive area of study in another discipline.

The Master's degree provides students the opportunity to develop and enhance their critical understanding of both the conceptual foundations of parks, recreation and tourism management and the procedures of systematic inquiry and critical problem solving as applied to planning and management issues. The department offers educational opportunities and resources for the preparation of professionals concerned with planning, organizing, managing and directing parks, recreation, sport, and tourism programs, areas, and facilities. Several Master's Degree options are available: MS in Parks, Recreation and Tourism Management, MS in Natural Resources-Outdoor Recreation Technical Option, Master of Natural Resources (MNR)-Outdoor Recreation Technical Option (non-thesis), and Online Professional Master of Parks, Recreation, Tourism and Sport Management (MPRTSM) (non-thesis). The Department also co-administers the Masters of Geospatial Information Science and Technology (MGIST) degree, Graduate Certificate in Geographic Information Science, and a Graduate Certificate in Sport and Entertainment Venue Management.

The general emphasis areas at the Master's level include: parks and recreation management, tourism development and management, geographic information systems, recreational sport management, and natural resource recreation management. The MS-NR and MNR (Outdoor Recreation Technical Option) develops the knowledge and skills needed for planning and managing natural resource-based outdoor recreation opportunities and resources. The online MPRTSM degree provides students with a solid professional and business education designed to advance their career development in parks, recreation, tourism, and sport industries. The online degree program operates on a cohort model and admits students in fall and spring semester.

Doctoral Degree Requirements: Although each doctoral course of study will be unique to the individual student, the usual course of study will include a minimum of 54 hours beyond the Master's. These credit hours are distributed among the core courses, statistics and research methods, a minor or substantive area consisting of 15 hours of course work approved by the student's faculty advisor, and the dissertation. Students are expected to have completed a Master's degree, preferably one with a thesis. Students without research experience will have to demonstrate an ability to produce scholarly work in PRTM.

Master's Degree Requirements: Each Master's Degree has <u>specific requirements</u>. The minimum credit hours range from 30 for MS in PRTM Degree, to 34 for MNR-Outdoor Recreation Technical Option Degree. Doctoral and M.S. application deadline is February 15 for both U.S. and international students. MPRTSM application deadline is May 15

Student Financial Support: Graduate assistantships and internships are available to students in this program on a competitive basis.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Philosophy and Religious Studies

Dr. Michael Pendlebury Professor and Department Head NC State Box 8103

Phone: 919.515.6103 Fax: 919.513.4351

Email: mjpendle@ncsu.edu

Website: http://www.ncsu.edu/chass/philo/

There are no graduate degrees in Philosophy or Religious Studies, but the Department offers a variety of graduate courses in Logic, Philosophy, and Religious Studies. One or more of these courses can be used to enhance many graduate degree programs.

The Department also administers the **Graduate Minor in Cognitive Science**.

GRADUATE COURSES

LOGIC

LOG 535 Advanced Logic and Metamathematics LOG 537 Model Theoretic Semantics

PHILOSOPHY

PHI 501 Kant2s Critique of Pure Reason

PHI 520 Global Justice

PHI(PSY) 525 Introduction to Cognitive Science

PHI 540 The Scientific Method

PHI 547 Philosophy, Evolution and Human Nature

PHI 575 Ethical Theory

PHI 598 Special Topics in Philosophy

PHI 798 Advanced Topics in Philosophy

PHI 816 Introduction to Research Ethics

RELIGIOUS STUDIES

REL 571 Darwinism and Christianity

REL 573 Religion, Gender, and Reproductive Technologies

REL 582 Religion and Conflict

Physics

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Physics	Y		Y				

GRADUATE FACULTY

P. R. Huffman, *Department Head*

Director of Graduate Programs:

D. E. Aspnes, Box 8202, 919/515-4261, aspnes@ncsu.edu, Physics

Named Professors: J. Bernholc; Named Distinguished Professors: D. W. Brenner, Z. Sitar; Distinguished Professors: F. So; Distinguished University Professors: D. E. Aspnes; Professors: H. Ade, R. J. Beichner, J. M. Blondin, J. D. Brown, M. T. Chu, L. I. Clarke, K. E. Daniels, W. L. Ditto, M. J. Escuti, R. E. Fornes, R. Golub, D. G. Haase, H. D. Hallen, P. R. Huffman, C. R. Ji, K. W. Kim, R. M. Kolbas, H. Krim, J. Krim, G. C. McLaughlin, L. Mitas, J. F. Muth, R. J. Nemanich, M. Paesler, M. Pasquinelli, S. P. Reynolds, R. Riehn, C. M. Roland, M. C. Sagui, T. M. Schaefer, J. E. Thomas, K. R. Weninger, Y. G. Yingling, A. R. Young; Research Professors: W. Borkowski, C. R. Philbrick, J. E. Rowe, B. A. Sherwood, J. W. York; Adjunct Professors: U. Agvaanluvsan, M. Buongiorno-Nardelli, J. L. Hubisz, D. J. Lee, P. J. Reynolds, J. Schwartz; Emeritus Professors: R. W. Chabay, K. T. Chung, J. W. Cook, S. Cotanch, W. R. Davis, D. C. Ellison, R. E. Fornes, G. L. Hall, K. L. Johnston, G. H. Katzin, F. Lado, G. E. Mitchell, R. R. Patty, P. J. Stiles, D. R. Tilley; Emeritus Distinguished Professors: G. Lucovsky; Associate Professors: L. Cao, D. B. Dougherty, C. Frohlich, K. Gundogdu, D. L.

Irving, J. P. Kneller, M. Unsal, H. Wang; *Research Associate Professors:* J. H. Kelley, W. Lu; *Adjunct Associate Professors:* P. E. Garrett, D. Lazzati; *Emeritus Associate Professors:* G. C. Cobb, G. W. Parker; *Assistant Professors:* M. W. Elting, M. P. Green, F. L. Hunte, A. Kemper, D. P. Kumah, S. Lim, R. L. Longland, D. Sun; *Research Assistant Professors:* J. R. Bochinski, A. G. Dinku; *Adjunct Assistant Professors:* B. R. Conrad; *Teaching Professors:* B. I. Fortner

Research opportunities in theoretical/computational physics are available in astrophysics, biomolecular simulations, chaos, condensed matter, nanoscience/nanomaterials, nuclear/particle physics, and relativity. Research opportunities in experimental physics are available in stronomy, atomic and molecular physics, biophysics, emergent phenomena, materials physics, nanoscale science, nonlinear systems, nuclear and particle physics, optics, physics education research, soft-condensed-matter physics and technology, and synchrotron radiation research.

Admission Requirements: Bachelor's degree in physics (or the equivalent), GRE, and the GRE Advanced test in physics.

Master's Degree Requirements: A minimum of 30 credit hours beyond the Bachelor's degree; demonstrated mastery of aspects of the physics curriculum. Thesis and non-thesis options.

Doctoral Degree Requirements: Seventy-two (72) credit hours beyond the Bachelor's degree; demonstrated mastery of core physics curriculum: PY 721, 781, 782, 783, and 785; pass a written qualifier exam, an oral preliminary exam, and an oral final defense.

Student Financial Support: Graduate teaching assistantships are available for new and continuing students. Research assistantships are available to continuing students and occasionally to new students. More than 95% of students are supported by assistantships.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Physiology

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Physiology			Y		Y		

GRADUATE FACULTY

Director of Graduate Programs:

P. E. Mozdziak, Box 7608, 919/515-5544, paul mozdziak@ncsu.edu, Poultry Science

Named Professors: W. L. Flowers, H. B. Patisaul; Named Distinguished Professors: J. T. Brake, J. Odle, R. Roe; Professors: G. W. Almond, K. E. Anderson, C. M. Ashwell, B. L. Black, A. T. Blikslager, R. J. Borski, T. T. Brown, P. A. Curtis, D. C. Dorman, F. W. Edens, K. L. Esbenshade, C. E. Farin, J. E. Gadsby, J. L. Gookin, S. L. Jones, S. W. Kim, H. Liu, K. M. Meurs, P. E. Mozdziak, J. N. Petitte, R. M. Petters, P. D. Siciliano, G. W. Smith; Adjunct Professors: J. B. Golden, E. A. Koutsos, D. W. Threadgill; Emeritus Professors: W. J. Croom, R. M. Grossfeld, H. F. Heatwole, T. E. Levere, J. F. Roberts, M. C. Roberts, T. D. Siopes, H. A. Underwood, S. P. Washburn, T. G. Wolcott; Associate Professors: L. B. Borst, B. A. Breuhaus, J. M. Bruno-Barcena, T. Ghashghaei, M. D. Koci, C. Maltecca, M. Niedzlek-Feaver, S. E. Phillips, M. Rodriguez-Puebla, J. A. Yoder; Research Associate Professors: H. Gracz; Adjunct Associate Professors: A. J. Moeser; Emeritus Associate Professors: J. L. Lubischer, S. Trivedi; Teaching Assistant Professors: E. B. Bohorquez

The Physiology Graduate Program is an interdisciplinary and interdepartmental program comprising faculty drawn from across the University. An advanced degree in Physiology is highly valued by the scientific community and can lead to careers in research and teaching in academia, industry and government laboratories, public policy and consulting. Research is carried out using a variety of model organisms, laboratory and companion and agriculturally important species.

Admission Requirements: Students entering the graduate program in Physiology should have a Bachelor's degree in a related biological or physical science. Undergraduate courses should include Physiology, Biochemistry, Organic Chemistry, Calculus, and Physics. Each application package will be screened by the Admissions Committee. Factors considered for admission include: grade point average (3.0 is required for regular admission), GRE scores, undergraduate courses, letters of recommendation, and the willingness of a member of the Graduate Physiology faculty to serve as the applicant's advisor.

Master's Degree Requirements: All Master's students are required to complete PHY 503, PHY 504, BCH 553, and a one-credit hour course in research ethics. *Master of Science Degree*: For a Master of Science degree a minimum of 30 semester hours of graduate work in the degree program is required including a minimum of 20 hours of course work at the 500-800 level. On average, the M.S. degree takes two to three years to complete. *Master of Physiology Degree*: The non-thesis Master's degree (Master of Physiology) requires a total of 36 credits. The median time to degree completion is 1.75 years or less.

Student Financial Support: Financial assistance for qualified students in the form of research assistantships, fellowships and traineeships is available through participating departments only and not through the Physiology program for thesis-based students only.

Other Relevant Information: Graduate students enrolled as Physiology majors are housed in the department of their major professor and may participate in departmental activities.

Click on Graduate Courses for current course information.

Recommended Courses Normally Included in Programs of Study for the M.S. and Ph.D. Degrees and the Non-Thesis MOP Program: Other recommended/supporting courses are available through many departments, e.g. Animal Science, Biochemistry, Biomathematics, Biotechnology, Cell Biology, Comparative Biomedical Sciences, Entomology, Genetics, Immunology, Microbiology, Nutrition, Pharmacology, Poultry Science, Psychology, Statistics, Toxicology, and Zoology, and may be included for consideration in the plan of work.

NCSU Graduate Catalog

Plant Biology

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Botany	Y		Y		Y		
Plant Biology	Y		Y		Y		

GRADUATE FACULTY

M. E. Daub, *Department Head*

Director of Graduate Programs:

R. L. Blanton, Box 7612, 919/513-2181, <u>larry_blanton@ncsu.edu</u>, Plant and Microbial Biology

Named Professors: J. M. Alonso, R. E. Dewey, A. M. Grunden, J. B. Ristaino, T. W. Rufty; Named Distinguished Professors: R. S. Boston, J. M. Burkholder, M. E. Daub, L. K. Hanley-Bowdoin; Distinguished University Professors: W. F. Thompson; Professors: R. L. Blanton, R. G. Franks, C. H. Haigler, W. A. Hoffmann, S. Hu, J. E. Mickle, R. Qu, H. A. Sederoff, T. R. Wentworth, R. W. Whetten, Q. Xiang, D. Xie; Research Professors: I. Y. Perera; USDA Professors: K. O. Burkey; Adjunct Professors: C. S. Brown; Emeritus Named Professors: W. F. Boss; Emeritus Professors: N. S. Allen, U. Blum, E. Davies, R. C. Fites, J. W. Hardin, J. M. Stucky, J. F. Thomas, C. G. VanDyke, E. A. Wheeler; Associate Professors: S. B. Carson, S. Komarnytsky, A. Krings, X. Li, T. A. Long, M. Pierce; Emeritus USDA Professors: W. W. Heck; Emeritus Associate Professors: H. V. Amerson; Assistant Professors: C. J. Doherty, T. Hsieh, S. N. Sheth, R. Sozzani, A. N. Stepanova; Research Assistant Professors: C. H. Saravitz; Teaching Associate Professors: C. V. Jordan; Teaching Assistant Professors: J. M. De Gezelle

Course offerings or research facilities are available in the following areas: plant cell biology, cellular imaging, cellulose biology, cellular signaling, plant development, plant hormones, epigenetics, plant systems biology, plant genetic engineering, transgene regulation and silencing, stress biology, chemical genomics, plant gravitational genomics, phytochemistry, metabolic engineering, plant-microbe interactions, aquatic ecology, toxic dinoflagellates, endangered species, plant community ecology, physiological ecology, tropical ecology, evolutionary ecology, paleobotany, plant systematics, evolution of flowering plants, and ethnobotany.

Admission Requirements: Students entering the graduate program in plant biology should have a bachelor's degree in plant biology or a related undergraduate program that includes biological, physical and mathematical science training including undergraduate courses in organic chemistry, calculus and genetics, as well as biology. All applications are screened by a departmental committee, and the best qualified applicants will be accepted until all available spaces are filled.

Master's and Doctoral Degree Requirements: The M.S. requires a total of 30 credit hours (20 of the 30 credit hours must be from 500-, 600-, 700/800-level courses; 18 credit hours must be letter graded); the Master of Plant Biology requires a total of 36 credit hours. The Ph.D. requires a total of 72 credit hours. Two core courses (Functional Plant Biology and either Plant Functional Ecology or Systematic Botany) are required. Other requirements include: a Plant Biology Colloquium, Plant Anatomy, an additional plant biology course, a graduate statistics course, a graduate ethics course, a thesis (for the Ph.D. and M.S., but not the Master of Plant Biology), a comprehensive examination (Ph.D.), oral thesis defense and a one-semester teaching responsibility per degree. Students must maintain a "B" average in all course work.

Other Relevant Information: Graduate research and teaching assistantships and tuition remission information are available from the department. New students supported by departmental research/teaching assistantships may elect to rotate through three laboratories during their first semester. At the end of the semester, they will choose a laboratory for their research activities consistent with their interests and available research projects. Provisions are available for cooperative research in more than one laboratory. Graduate students are expected to attend and participate in the seminar program every semester they are in residence. The department participates in training grants in biotechnology.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Plant Physiology (Minor Program)

GRADUATE FACULTY

Professor T. W. Rufty Jr., Coordinator

NCSU Box 7620 919.515.3660

Email: tom_rufty@ncsu.edu

The plant physiology program is an interdepartmental offering. Although not a formal degree program, students may elect to major or minor in the plant physiology program at both the M.S. and Ph.D. levels. Students entering the program should have appropriate knowledge in plant biology, biochemistry, mathematics and physics. Some formal training in genetics and statistics is normally expected.

When majoring in plant physiology, students will be closely affiliated with the same department as their major professor. As such, they will be required to meet respective departmental requirements for teaching, written and oral examinations, and seminar attendance. Departments currently participating in this program are: Biochemistry, Botany, Crop Science, Forestry, Genetics, Horticultural Science, Plant Pathology, and Soil Science. The chair or co-chair of the student's advisory committee must be a member of the Plant Physiology Faculty.

The purpose of the plant physiology curriculum is to ensure that students obtain substantive understanding of the physiological processes controlling plant behavior. The course requirements for graduate students are set by each graduate committee. Advanced knowledge is expected in biochemistry, plant physiology, plant structure and function, and molecular biology.

Poultry Science

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Poultry Science			Y		Y		

GRADUATE FACULTY

P. A. Curtis, Department Head

Director of Graduate Programs:

J. L. Grimes, Box 7608, 919/515-5406, jesse_grimes@ncsu.edu, Poultry Science

Named Distinguished Professors: J. T. Brake, P. R. Ferket; Professors: K. E. Anderson, C. M. Ashwell, D. K. Carver, P. A. Curtis, F. W. Edens, J. L. Grimes, H. M. Hassan, P. E. Mozdziak, E. O. Oviedo-Rondon, J. N. Petitte, D. P. Wages; Adjunct Professors: M. Choct, J. B. Golden, J. K. Northcutt, W. B. Roush, S. M. Shane, Z. Uni; Emeritus Professors: T. A. Carter, V. L. Christensen, W. J. Croom, J. D. Garlich, W. M. Hagler, G. B. Havenstein, C. R. Parkhurst, B. W. Sheldon, J. C. Shih, T. D. Siopes, C. M. Williams; Associate Professors: R. B. Beckstead, M. T. Knauer, M. D. Koci; Adjunct Associate Professors: C. R. Stark, O. T. Toomer; Assistant

Professors: A. C. Fahrenholz, K. A. Livingston; *USDA Assistant Professors:* O. T. Toomer; *Adjunct Assistant Professors:* D. S. Casey, Y. O. Fasina, J. V. Felts, A. G. Gernat, C. L. Heggen-Peay, R. O. Maguire, T. F. Middleton, M. H. Schwartz, C. J. Williams

Course offerings and research programs are comprehensive in the areas of physiology, nutrition, microbiology, molecular biology, biotechnology, food science, immunology, genetics, pathology, and toxicology. The demand for men and women with advanced training in poultry science is far greater than the supply. Opportunities exist for graduates in research and teaching in universities, government, and private industry.

Admission Requirements: Factors considered for admission include grade point average, strength of prior academic program, experience, letters of recommendation, and special skills or interests. GRE scores are required.

Master's Degree Requirements: While there are no specific course requirements for the master's degree in Poultry Science, most programs exceed the minimum 30 credit hours.

Doctoral Degree Requirements: See <u>Animal Science and Poultry Science</u>.

Student Financial Support: Both research and teaching assistantships are available on a competitive basis within the department. General requirements for these assistantships are as described in the Graduate Catalog. Other financial support may be available in the form of graduate stipend supplementation, research grant support, or out-of-state tuition waivers in accordance with the University's Graduate Student Support Plan.

Other Relevant Information: The Department of Poultry Science occupies modern facilities in Scott Hall, a three-story building on the main campus adjacent to the D.H. Hill Library. The department consists of about 20 faculty, approximately 40 support staff, 25 graduate students and postdoctoral associates, and 100 undergraduate students.

For more information, visit the **Department of Poultry Science** website.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Psychology

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA	
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Psychology	Y	Y		

GRADUATE FACULTY

C. B. Mayhorn, *Department Head*

Director of Graduate Programs:

M. B. Wyer, Box 7650, mary_wyer@ncsu.edu, Psychology

Professors: R. Azevedo, L. E. Baker-Ward, J. P. Braden, L. L. Foster, D. J. Gillan, D. O. Gray, A. g. Halberstadt, M. E. Haskett, T. M. Hess, D. B. Kaber, C. B. Mayhorn, A. W. Meade, R. W. Nacoste, K. E. Stewart, E. N. Wiebe; Clinical Professors: N. S. Murr; Adjunct Professors: A. D. Hall, W. M. Wechsberg; Emeritus Professors: J. W. Cunningham, K. B. DeBord, D. W. Drewes, W. P. Erchul, D. O. Gray, J. W. Kalat, T. E. Levere, J. E. Luginbuhl, D. W. Martin, D. H. Mershon, J. J. Michael, A. C. Schulte, M. S. Wogalter; Associate Professors: J. C. Allaire, J. C. Begeny, C. C. Brookins, J. L. Burnette, S. B. Craig, S. L. Desmarais, D. Gruehn, A. C. McLaughlin, B. S. Mehlenbacher, C. S. Nam, S. D. Neupert, S. B. Pond, S. A. Stage, M. A. Wilson, M. B. Wyer; Adjunct Associate Professors: J. W. Fleenor; Emeritus Associate Professors: R. E. Mitchell; Assistant Professors: S. Cho, J. Feng, E. Hope, E. Kim, K. S. Mulvey, K. Norwalk, L. M. Widman; Teaching Assistant Professors: H. M. Njie, J. M. Simons-Rudolph

The Department of Psychology offers five courses of study (concentrations) leading to the Ph.D.: applied social and community psychology, human factors and applied cognition, industrial-organizational psychology, lifespan developmental psychology, and school psychology. An additional master's degree program is available for school psychology.

Admission Requirements: With the exception of the school psychology master's degree program, admitted students enter doctoral training programs. Applicants must be graduates of accredited institutions. Although a degree in psychology is not required, applicants must demonstrate that their academic backgrounds have prepared them for doctoral training in their specialty area. A strong academic record, competitive scores on the GRE (General Test) and three satisfactory letters of recommendation are required for admission. Research experience is important. Match of applicants' research interests with current faculty research is an important consideration. See https://psychology.chass.ncsu.edu/graduate/apply.php for additional information.

Master's Degree Requirements: The department offers the master's degree in school psychology; students in the other concentrations are admitted only to the doctoral program. Students completing the school psychology master's program are eligible for licensure as public school psychologists in North Carolina. The program requires a total of 60 credit hours,

including two years of course work, a summer practicum program, and a full-time internship in the third year.

For students entering doctoral programs, the master's degree is awarded only in special circumstances, typically when a student in good standing chooses not to continue in the doctoral program.

Doctoral Degree Requirements: The graduate program for each doctoral student is determined in conjunction with the student's graduate advisory committee and tailored to the needs, interests, and accomplishments of the individual. Requirements vary across concentrations, but all doctoral plans of work include at least 72 credit hours. See https://psychology.chass.ncsu.edu/graduate/ for information about requirements for different concentrations.

Student Financial Support: Many graduate students receive financial support in the form of teaching or research assistantships. All admitted applicants are considered for assistantships.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Public Administration

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
International Studies					Y		
Public Administration	Y				Y		

GRADUATE FACULTY

Directors of Graduate Programs:

- B. L. Nowell, Box 8102, 517/377-0932, blnowell@ncsu.edu, Political Science
- B. McDonald, Box 8102, bmcdona@ncsu.edu, Political Science
- C. E. Griffin, Box 8102, 919/515-5048, clifford griffin@ncsu.edu, Political Science
- J. D. Coggburn, Box 8102, 919/515-1888, jcoggburn@ncsu.edu, Political Science

Named Distinguished Professors: M. D. Schulman; Professors: T. A. Birkland, R. M. Clerkin, J. D. Coggburn, F. W. Cubbage, D. M. Daley, G. D. Garson, M. A. Johnson, A. F. Khater, J. Kuzma, A. W. Mitchell, B. L. Nowell, R. P. Patterson, M. A. Renkow, E. O. Sills, A. J. Taylor; Emeritus Professors: L. S. Bull, C. K. Coe, E. W. Erickson, R. L. Moxley, J. C. Shih, M. S. Soroos, M. A. Witt; Emeritus Distinguished Professors: S. W. Buol; Associate Professors: R.

M. Berry-James, A. B. Bigelow, W. A. Boettcher, J. R. Brunet, C. Galik, C. E. Griffin, H. H. Hobbs, J. Kiwanuka-Tondo, R. C. Kochersberger, L. V. Kochtcheeva, B. McDonald, R. S. Moog, M. T. Nance, T. V. Reid, M. J. Struett, J. E. Swiss, J. M. Wallace, S. B. Wiley; *Emeritus Associate Professors:* L. D. Gustke, R. C. Kochersberger, R. J. Thomson, M. L. Vasu, S. T. Warren; *Assistant Professors:* J. A. Coupet, J. C. Diebold, M. Khisa, J. Liao, R. J. Reardon, A. J. Stewart; *Teaching Assistant Professors:* T. A. Appling, J. P. Crane-Seeber, D. Mitin, A. G. Solari, D. L. Weisel

Public Administration students at NC State are prepared for a career in public service. They will develop the leadership tools and knowledge they need to serve, manage and lead public or nonprofit organizations or to conduct cutting-edge academic research.

Admission Requirements: A list of required application documents can be found on the Public Administration page. The deadline to apply to the MPA program is May 15 (March 1 for International applicants) for Fall admission and November 1 (March 1 for International applicants) for Spring admission. The deadline to apply to the Ph.D. program is March 15 (March 1 for International applicants) for Fall admission. Completed applications received by February 1 will receive consideration for all available university and department scholarships and assistantships.

Master's Degree Requirements: The MPA degree requires the completion of 40 graduate credit hours:

- 21 credit hours of core coursework
- 19 credit hours of elective coursework
- o Students lacking the equivalent of one year of full-time public service experience must complete a 3 credit hour internship as part of their elective coursework.

Prerequisites for the program are an undergraduate course in microeconomics and an intermediate statistics (equivalent to ST 311) course. Students who do not have one or both of these prerequisite courses must successfully complete equivalent coursework prior to graduation. The MPA is an Option B Master's degree with a one-person committee and no final oral examination. Details on the degree requirements can be found on the Master of Public Administration page.

The MPA program offers elective coursework in public management, nonprofit management, urban management, financial management, organizational leadership, public policy and justice administration.

Doctoral Degree Requirements: The Ph.D. degree requires the completion of 72 graduate credit hours:

- 60 credit hours of coursework (18 hours of relevant graduate credit from a prior Master's degree may be used; total degree hours must include at least 36 hours at the doctoral level)
- 12 credit hours of dissertation research

Details on the degree requirements can be found on the **Ph.D.** in **Public Administration page**.

Each student will select or develop one or two fields of specialization.

Student Financial Support: A limited number of fellowships and graduate assistantships are offered by the Department of Public Administration. Contact the Department for more information. Other forms of student aid are described in the financial aid section of the Graduate Catalog.

Other Relevant Information: The Department of Public Administration also offers Graduate Certificates in Public Policy and Nonprofit Management, either of which can be taken alone or in conjunction with a graduate degree.

Click on **Graduate Courses** for current course information.

NCSU Graduate Catalog

Science, Technology, Engineering, and Mathematics Education

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	Master of	M.Ed.	MFA
Technology Education			Y		Y	

GRADUATE FACULTY

Director of Graduate Programs:

A. Clark, Box 7801, 919/515-1771, <u>aclark@ncsu.edu</u>, Science, Technology, Engineering, and Mathematics Education

Professors: A. Clark, E. N. Wiebe; *Emeritus Associate Professors:* V. W. DeLuca, R. E. Peterson, R. E. Wenig; *Assistant Professors:* C. D. Denson; *Adjunct Assistant Professors:* P. P. Carpenter; *Emeritus Assistant Professors:* J. L. Crow; *Teaching Assistant Professors:* T. B. Baldwin, B. Matthews, A. Y. Scales

The Technology Education Program offers a Master's of Education – Distance Education concentration in Technology Education. We prepare educators and researchers for positions as teachers, leaders, and university faculty of the highest quality. We are particularly proud of our emphasis on the use of technology to enhance teaching. Students take courses in their educational specialty, in general professional education, and in academic discipline areas including: computer science, engineering, graphic arts, and statistics.

Our master's program can lead to initial teaching licensure. The program can be designed to lead to North Carolina M-licensure as a teacher of technology at grades 6-9 and/or 9-12. Programs are also available for those seeking advanced graduate-level certification as a teacher. Finally, students may choose a program to prepare for teaching careers in post-secondary education.

Some of our elect to move directly from our master's into our doctoral program in <u>Learning and Teaching in STEM – Technology Education</u>. These students are knowledge-seekers and are eager to pursue educational problems and develop critical thinking skills in a collaborative environment. The programs prepare individuals for positions in their fields of study related to:

- 1. scholarly inquiry and discourse in their discipline,
- 2. preparation of K-12 teachers,
- 3. instruction and development issues in K-16, and
- 4. leadership positions.

Admission Requirements: Applicants for the Master of Education – Distance Ed degree in Technology Education must submit a completed application to the Graduate School. Please see the <u>Technology Education website</u> for details. The deadlines for submission of an application, and academic and professional background necessary for admission differ by specific program.

Master's Degree Requirements: Master's Degree programs require a minimum of 30 semester hours of graduate work. Students who choose the M.S. degree may be able to substitute up to six semester hours of thesis research for part of the course load. The M.Ed. degree is online only.

Student Financial Support: A small number of teaching and research assistantships are available, and out-of-state tuition remission may be available for one year for students on assistantships. Please discuss these opportunities directly with program area faculty.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Social Work

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Social Work					Y		

GRADUATE FACULTY

K. Bullock, Department Head

Director of Graduate Programs:

K. L. Stansbury, Box 7639, klstansb@ncsu.edu, Social Work

Professors: K. Bullock, J. T. Pennell; Associate Professors: N. R. Ames, W. J. Casstevens, K. L. Stansbury, J. Taliaferro, I. Yoon; Emeritus Clinical Associate Professors: L. R. Williams; Assistant Professors: Q. Cryer-Coupet, A. R. Ellis, J. K. Hall; Clinical Assistant Professors: B. A. Zelter; Teaching Assistant Professors: D. C. Fitzpatrick

The mission of the MSW program is to prepare students for practice that is sensitive to the social, economic, cultural, demographic and political contexts that shape our state and beyond. Within a framework emphasizing professional ethics, social justice, diversity, strengths and community engagement, the Department seeks to equip students for leadership roles and effective practice.

Admission Requirements (scroll down to see additional requirements for Advanced Standing applicants)

- Bachelor's degree (any major) from an accredited liberal arts college or university.
- GPA of 3.0 or higher for the last 60 hours of academic work. Students with a GPA less than 3.0 but greater than 2.5 for the last 60 hours of academic course work must have official Graduate Record Exam (GRE) or Miller Analogies Test (MAT) scores forwarded to the Graduate School.
- Liberal arts coursework in the social sciences, humanities, biology, and statistics.
 - o Four courses in the social sciences (e.g. anthropology, economics, ethnic studies, political science, psychology, social work, sociology), with a grade of C or better.
 - o Three courses in the humanities (e.g. comparative religions, history, linguistics, literature, modern or classic languages, philosophy and ethics, visual and performing arts), with a grade of C or better.
 - A biology and a statistics course, with a grade of C or better.
- A variety of life and work experience in human services, paid or volunteer. Note: In accordance with the CSWE standards, students cannot receive academic credit based on life and work experience.

Additional Requirements for Advanced Standing

In addition to the above admissions requirements, the following applies to Advanced Standing applicants:

- Applicants with a BSW degree from an accredited program and a GPA of at least 3.5 (on a 4.0 scale) for the last 60 credit hours of academic work are eligible to apply for Advanced Standing status. Students with a GPA less than 3.5 but greater than 2.5 for the last 60 hours of academic course work must have official Graduate Record Exam (GRE) or Miller Analogies Test (MAT) scores forwarded to the Graduate School.
- BSW students who graduate prior to the first semester of Advanced Standing coursework will be considered for admission.
- Applicants must have grades of "B" or better in all social work courses.
- One of three references must be from Field/Task Supervisor or Field Director/Liaison.

Master's Degree Requirements: The MSW Program provides two options: The Traditional 60-credit program, and the 39-credit Advanced Standing Program, which is designed for BSW graduates only.

We do not offer a part-time curriculum at this time.

Other Relevant Information: The MSW program is accredited by The Council on Social Work Education (CSWE).

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Sociology

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Sociology	Y		Y				

GRADUATE FACULTY

Director of Graduate Programs:

S. J. McDonald, Box 8107, 919/515-9028, steve_mcdonald@ncsu.edu, Sociology and Anthropology

Named Distinguished Professors: M. D. Schulman; Named Distinguished University Professors: W. A. Wolfram; Professors: M. P. Atkinson, T. N. Greenstein, E. L. Kick, P. L. McCall, S. J. McDonald, T. L. Parcel, A. H. Ross, M. L. Schwalbe, T. E. Shriver; Emeritus Named Professors: V. M. Aldige; Emeritus Professors: W. B. Clifford, E. M. Crawford, L. R. Dellafave, T. N. Hobgood, R. L. Moxley, R. D. Mustian, M. M. Sawhney, C. R. Tittle, E. M. Woodrum, M. A. Zahn, J. J. Zuiches; Emeritus Distinguished Professors: L. B. Otto; Associate Professors: S. K. Bowen, D. T. Case, M. L. Crowley, S. M. De Coster, K. L. Ebert, N. M. Haenn, S. B. Longo, A. Manzoni, W. R. Smith, M. E. Thomas, M. S. Thompson, J. M. Wallace; Adjunct Associate Professors: J. F. Thigpen, W. E. Wormsley; Emeritus Associate Professors: R. C. Brisson, R. F. Czaja, A. C. Davis, S. C. Lilley, R. J. Thomson, M. L. Walek; Assistant Professors: M. A. DeSoucey, A. D. Fernandes, C. A. Juarez, W. Liao, S. C. McManus, J. K. Millhauser; Adjunct Assistant Professors: B. L. Clark

The department offers Master's and doctoral programs in sociology designed to prepare students for academic, research, and applied careers. The programs are structured to provide an intellectually stimulating and academically rigorous, yet supportive, environment that

emphasizes developing research skills through course work and close collaboration with faculty.

Admissions Requirements: In addition to general Graduate School requirements, applicants are required to provide a writing sample and should be intending to complete the Ph.D. degree in sociology. We routinely accept applications only for the fall semester. The completed application should be received no later than January 1 to ensure full consideration for assistantship support. Applications for spring admission are considered only under special circumstances (for example, when the student has already completed some graduate course work in sociology).

Master's Degree Requirements: Applicants should have received/be receiving a Bachelor's degree from an accredited institution with a major in sociology. Other majors are considered, but students may have to make up deficiencies without credit. The M.S. requires a thesis, whereas a Master of Sociology (M.SOC.) requires six semester credit hours of practicum (supervised field placement in an organization or agency) and a research paper. A minor for both degrees is optional. Thirty (30) hours of credit is required to obtain a Master's degree.

Doctoral Degree Requirements: The Ph.D. requires a total of 72 credit hours. The degree normally requires a Master's in sociology. Doctoral students take core courses in theory and methods/analysis and at least three courses each in two substantive areas of specialization. Up to 36 credit hours for course work at the master's level at NCSU may be counted towards that total. Up to 18 credit hours from course work at the master's level from another university may be counted towards the total of 72 credit hours. A minor is optional.

Student Financial Support: Teaching and research assistantships are available on a competitive basis.

Click on **Graduate Courses** for current course information.

NCSU Graduate Catalog

Statistics

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Statistics	Y		Y		Y		

GRADUATE FACULTY

L. A. Stefanski, Department Head

Directors of Graduate Programs:

J. B. Post, Box 8203, jbpost2@ncsu.edu, Statistics W. Lu, Box 8203, 919/515-1915, wlu4@ncsu.edu, Statistics

Named Professors: M. Davidian, D. A. Dickey, A. A. Tsiatis; Named Distinguished Professors: Z. Zeng; Named Distinguished University Professors: A. B. Godfrey; Distinguished University Professors: M. M. Goodman; Professors: B. Bhattacharyya, D. D. Boos, S. K. Ghosh, K. Gross, M. L. Gumpertz, A. R. Hall, J. M. Hughes-Oliver, S. N. Lahiri, W. Lu, S. V. Muse, L. A. Stefanski, J. L. Thorne, J. Tzeng, A. G. Wilson, F. A. Wright, D. Zhang; Adjunct Professors: H. D. Bondell, S. Chow, J. R. Chromy, R. B. Conolly, J. H. Goodnight, P. H. Morgan, D. W. Nychka, R. W. Setzer, E. A. Stone, R. D. Wolfinger, S. S. Young; *Emeritus Named Professors:* M. W. Suh; *Emeritus Professors:* P. Bloomfield, C. Brownie, T. M. Gerig, H. J. Gold, T. Johnson, J. F. Monahan, L. A. Nelson, K. H. Pollock, C. H. Proctor, C. P. Quesenberry, J. O. Rawlings, D. L. Ridgeway, W. H. Swallow, J. L. Wasik; Emeritus Named Distinguished Professors: W. R. Atchley, J. E. Riviere; Associate Professors: S. Ghoshal, E. B. Laber, A. Maity, D. E. Martin, R. G. Martin, A. A. Motsinger-Reif, J. A. Osborne, B. J. Reich, D. M. Reif, T. W. Reiland, C. E. Smith, R. Song, A. Staicu; Research Associate Professors: C. Arellano, E. Ceyhan; Adjunct Associate Professors: L. Li; Emeritus Associate Professors: A. E. Headen; Assistant Professors: E. C. Chi, J. S. Guinness, X. J. Jeng, J. K. Pacifici, J. W. Richards-Stallings, L. Xiao, S. Yang; Research Assistant Professors: E. H. Griffith; Adjunct Assistant Professors: G. Bobashev, M. G. Ehm, C. M. Gotwalt, J. S. Kimbell, E. C. Mannshardt, H. Zhou; Teaching Associate Professors: H. M. McGowan, P. R. Savariappan; Teaching Assistant Professors: B. A. Alhanti, J. W. Duggins, J. B. Post; Lecturers: B. K. Eder

Admission Requirements: The well-prepared applicant to the department's Master's programs has good grades in a three-semester calculus sequence, a two-semester advanced calculus sequence, a semester of linear algebra, and a two-semester sequence in probability and statistics. Some of these courses may be taken as part of the program, but this may result in lengthening the stay. Students may apply to either the Master's or PhD program directly from a Bachelor's degree. GRE General Test scores are required, but Subject Test scores are not.

The written statement should not exceed two pages and should describe the applicant's academic and career goals as well as special interests in the area of statistics. Applicants may also submit a resume. Individuals applying for fall enrollment and who wish to be considered for financial aid should have their completed applications in by no later than December 15 of the preceding year. Applications arriving after that will be considered but may be assigned lower priority. Starting Summer of 2013, we will begin to offer courses to allow a student to complete the Master of Statistics degree in one calendar year. The one year masters program has the same requirements as the current Master of Statistics program. Since courses start in the summer, the deadline to submit completed applications is January 15 of the same year, and student should apply for 'Summer 1' admission. Students are not normally admitted for spring.

Master's Degree Requirements: All Master's programs in statistics require a minimum of 34 credit hours, of which 12 are first-year core (ST 512, ST 521, ST 522, ST 552 and their labs),

one is supervised consulting (ST 641). The remainders are statistics and/or supporting electives.

Doctoral Degree Requirements: The Ph.D. program in statistics requires 22 course credit hours beyond the Master's, of which 9 are Ph.D. core courses (ST 779, ST 793, and ST 758), one is supervised consulting (ST 841), and 12 are Ph.D.-level statistics electives.

Student Financial Support: Departmental assistantships and fellowships are awarded to students in the Ph.D. program each year on a competitive basis.

Other Relevant Information: With a large graduate faculty representing virtually all major statistical specializations, the department is recognized as a world leader in graduate education and research in statistics. The Department provides a dynamic environment for teaching, core research and collaborative research across disciplines, with formal program concentrations in biostatistics, bioinformatics, environmental, financial and mathematical statistics.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Teacher Education and Learning Sciences

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Teacher Education and Learning Sciences	Y						

GRADUATE FACULTY

Directors of Graduate Programs:

J. K. Lee, Box 7801, 919/513-0126, <u>jklee@ncsu.edu</u>, Teacher Education and Learning Sciences J. T. DeCuir-Gunby, Box 7801, 919/513-7669, <u>jessica_decuir@ncsu.edu</u>, Teacher Education and Learning Sciences

Professors: C. L. Crossland, D. A. Cullinan, J. T. DeCuir-Gunby, G. M. Kleiman, J. K. Lee, P. L. Marshall, J. Nietfeld, K. M. Oliver, E. J. Sabornie, H. A. Spires, P. Sztajn; Emeritus Professors: B. J. Fox, C. A. Pope, R. J. Pritchard, N. A. Sprinthall; Associate Professors: C. M. Beal, S. J. Carrier, D. S. Davis, D. Eseryel, M. A. Evans, J. H. Hunt, M. M. Manfra, J. Minogue, M. M. Thomson, T. A. Walkowiak, A. M. Wiseman, C. A. Young; Adjunct Associate Professors: H. A. Davis-Bauer; Emeritus Associate Professors: J. F. Arnold, S. S. Osborne, L. M. Thies-Sprinthall; Assistant Professors: M. M. Falter, D. L. Gray, J. F. Grifenhagen, C. C. Lee, J. N. Pearson, T. A. Rutherford, J. Wilson; Clinical Assistant Professors: K. F. Hoffmann, E. T. Horne; Adjunct Assistant Professors: J. O. Corn, S. B. Freeman, M. J. Maher, M. K. Monaco, J. L. Painter, T. E. Ray; Teaching Associate Professors: V. N. Faulkner, A. D. Harrington; Teaching Assistant Professors: D. E. Benge, D. E. Crissman, M. J. Jeffries, S. B.

The Ph.D. program in the Department of Teacher Education and Learning Sciences is primarily designed to prepare students for roles as researchers and educators in higher education and industry, or for instructional leadership at school district and state levels. Five program areas of study (focus) are offered by the department: Educational Psychology; Elementary Learning Sciences; Learning, Design, & Technology; Literacy & English Language Arts; and Social Studies Education.

The NC Department of Public Instruction has conferred accreditation to the graduate programs in Teacher Education and Learning Sciences. The College of Education is approved by the Council for the Accreditation of Educator Preparation (CAEP).

Admission Requirements: *Teacher Education and Learning Sciences:* A 500-800 word statement describing professional goals is required, along with transcripts and reference letters. Some areas of study require that applicants be qualified to hold a baccalaureate-level teaching license or have teaching experience. A match to resources and faculty areas of interest and expertise is necessary since the program is competitive. The Graduate School requires a 3.0 in the undergraduate program. GRE scores not more than five years old are required for the doctoral program.

Doctoral Degree Requirements: *Teacher Education and Learning Sciences:* A minimum of 72 course credit hours beyond a bachelor's degree is required. For students with a master's degree, at least 60 new hours must be taken after the student matriculates into the doctoral program. The 60-hour program includes 12 hours of scholar leader courses (college and departmental levels), 15 hours of research, 24 hours of program area specialty courses, and 9 hours of dissertation credit.

Student Financial Support: Teaching and Research Assistantships are available on a limited basis.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Technical Communications

Degrees Offered:

Program Title	Ph.D. Ed.	D. M.S.	M.A.	Master of	M.Ed.	MFA	
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GRADUATE FACULTY

The Master of Science in technical communication is designed to prepare professional communicators for advanced positions in industry and research organizations; with appropriate electives, students can prepare for careers in web design and development, software documentation, environmental communication, medical writing, industrial training in writing and editing, publications management and related areas.

Admission Requirements: Applicants should submit a resume and a writing sample. The application deadline is June 15. Those who wish to be considered for teaching assistantships should complete the application by February. Students are admitted in the fall semester only.

Requirements for MS in Technical Communication: The program requires 33 semester hours: 15 hours in the fields of technical writing, publication management, rhetoric and a projects course; the remaining hours are taken in applications, theory and methods and cross-disciplinary courses. Students must also satisfy a requirement for one semester of professional work experience. See <u>program website</u> for specific requirements by concentration.

Student Financial Support: <u>Teaching assistantships</u> are available for a limited number of promising students. These students work with an experienced teacher in their first year to assist in 300-level professional writing courses. They devote half time in subsequent semesters to teaching technical communication.

Click on Graduate Courses for current course information.

NCSU Graduate Catalog

Textile and Apparel Management

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
<u>Textiles</u>			Y		Y		

GRADUATE FACULTY

A. M. Seyam, *Department Head*

Director of Graduate Programs:

Y. Xu, Box 8301, yxu11@ncsu.edu, Textile and Apparel Management

Named Professors: R. L. Barker, D. Hinks, W. Oxenham; Named Distinguished Professors: B. Pourdeyhimi; Named Distinguished University Professors: A. B. Godfrey; Professors: T. G. Clapp, T. K. Ghosh, C. L. Istook, J. A. Joines, M. W. King, T. A. Lamar, K. K. Leonas, T. J. Little, S. Michielsen, M. M. Moore, A. M. Seyam, R. Shamey, X. Zhang; Adjunct Professors: D. A. Bruner, K. Mathur, W. G. O'Neal, T. W. Theyson; Emeritus Named Professors: S. K. Batra, M. W. Suh, S. C. Winchester; Emeritus Professors: R. A. Barnhardt, R. A. Donaldson, A. H. El-Shiekh, N. C. Powell, W. C. Stuckey; Emeritus Distinguished Professors: M. H. Mohamed; Associate Professors: K. E. Annett-Hitchcock, P. Banks-Lee, K. A. Barletta, H. H. Hergeth, G. L. Hodge, R. Kotek, L. L. Parrillo-Chapman, L. F. Rothenberg, Y. Xu; Adjunct Associate Professors: M. T. Fralix, G. M. Garland, J. Meng, M. A. Messura, S. B. Moore, E. D. Parrish; Emeritus Associate Professors: H. A. Davis, P. B. Hudson, M. L. Robinson, G. W. Smith; Assistant Professors: E. N. Ford, D. R. Matthews, J. A. Porterfield, E. Shim, M. Suh, A. J. West, J. F. Woodbridge; Research Assistant Professors: G. M. Garland, B. Maze; Teaching Associate Professors: W. D. Harazin; Lecturers: G. M. Devine

NC State's College of Textiles, and the Department of Textile and Apparel, Technology and Management (TATM), prepares future leaders for the textile, apparel, home/furniture, fashion and retail industries. Based in Raleigh, North Carolina, undergraduate and graduate programs (Fashion and Textile Management; Fashion and Textile Design) incorporate global marketplace dynamics with a strategic management focus. Our graduates incorporate "art/design" + "science/technology" + "management" concepts in creative problem-solving. Our program is equipped with access to and experiences utilizing the latest industry technologies. The majority of the students have an enriching and intensive study abroad experience. Our program faculty works closely with industry partners, including the Department's 24-member Industry Advisory Board, to develop academic and experiential "real world" learning experiences. Student internships combined with a global alumni network provide an additional "value-added" experience, with our students prepared to make an immediate impact in diverse companies throughout the global supply chain. Career paths of our graduates are in the areas of: brand marketing, merchandising, retail, sourcing, private brand development, market analyst, design, product development, supply chain, and public relations and communications.

Master of Science in Textiles Degree: The objective of the Master of Science (MS) in Textiles is to prepare students for careers that require independent research skills, including designing, planning, and carrying out research projects. Students can choose to focus their studies in one of the following areas of specializations: Textile and Fashion Design, Retail and Brand Management, Textile Technology, and Textile Management. The MS degree requires a minimum of 36 hours of study including a thesis and typically takes 2 years to complete. Students interested in continuing with a Ph.D. in Textile Technology and Management (TTM) or Fiber and Polymer Science (FPS) are encouraged to pursue the MS degree.

Master of Textiles Degree: The Non-Thesis Master of Textiles (MT) program offers preparation and career advancement for students with interests in the design, management, and technological perspectives of the textile industry. The program is available on campus and online via Distance Education (DE) with flexibility to accommodate a breadth of student needs. The

MT degree requires a minimum of 30 credit hours and can be completed in only two semesters (1 year) of full-time on campus study or up to a maximum of six (6) years for part time oncampus or DE students.

Accelerated Bachelor's and Master's Degrees: The Accelerated Bachelor's and Master's (ABM) degrees in the Department of Textile and Apparel, Technology and Management (TATM) are designed to provide exceptional undergraduate students in the Fashion and Textile Management (FTM) and Fashion and Textile Design (FTD) programs with the opportunity to complete a BS degree (in FTM or FTD) and a TATM Master's degree in 5 to 5 1/2 years. Students in the ABM program can choose to pursue a non-thesis track in which they can potentially complete a Master of Textiles (MT) degree within 12 months after obtaining a Bachelor's (BS) degree in FTM or FTD. Alternatively, students can choose the thesis track in which they can potentially complete a Master of Science in Textiles (MS) degree within the 18 months following obtaining a BS degree in FTM or FTD.

Admission Requirements: Students with a Bachelor of Science or a Bachelor of Arts degree may apply to either of the degree programs. Students apply with degrees in textiles, engineering, management, or design. The minimum acceptable overall Grade Point Average (GPA) is a 3.0 out of 4.0, based on most current U.S. universities. Students should have 20 credit hours in mathematics and natural sciences in their undergraduate degree. Degrees must be obtained from a four-year, accredited university. Graduate transfer credits can only be from other U.S. universities, and must be approved by the student's graduate committee. Certificates and diplomas are not recognized as undergraduate degrees.

Click <u>Application</u> for more information on application procedures and requirements.

Student Financial Support: Competitive financial aid in the form of assistantships may be available for full-time Master of Science students.

Other Relevant Information: The Department of Textile and Apparel, Technology and Management houses a Digital Design lab which specializes in 3D Body Scanning, Direct Digital Printing, Whole Body Knitted Garments, and Computer Aided Apparel and Fabric Design. Additionally, the department includes the Fashion Studio, The Textile Management Sciences Lab, Textile Design Studio, Braiding Lab, Three-Dimensional Weaving Lab, and an Advanced Testing Lab that will allow students to experience hands-on advanced textile technology and management.

Click <u>Graduate Programs in TATM</u> for more details on degree requirements.

Click on Graduate Courses - Textile Technology Management for current course information.

NCSU Graduate Catalog

Textile Chemistry

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Textile Chemistry			Y				

GRADUATE FACULTY

Director of Graduate Programs:

M. Pasquinelli, Box 8301, 919/515-9426, <u>melissa_pasquinelli@ncsu.edu</u>, Textile Engineering, Chemistry and Science

Named Professors: R. L. Barker, H. S. Freeman, D. Hinks, A. E. Tonelli; Named Distinguished Professors: B. Pourdeyhimi; Distinguished Professors: R. J. Spontak; Professors: K. R. Beck, T. G. Clapp, L. I. Clarke, A. M. El-Shafei, R. E. Gorga, P. J. Hauser, S. M. Hudson, W. J. Jasper, J. A. Joines, M. W. King, M. G. McCord, S. Michielsen, M. Pasquinelli, J. P. Rust, R. Shamey, A. J. Williams, X. Zhang; Adjunct Professors: A. Bogdanovich, W. G. O'Neal; Emeritus Named Professors: S. P. Hersh, C. B. Smith; Emeritus Professors: A. H. El-Shiekh, P. L. Grady, B. S. Gupta, G. N. Mock, M. H. Theil, C. Tomasino; Emeritus Distinguished Professors: M. H. Mohamed; Associate Professors: P. D. Bradford, E. A. DenHartog, J. S. Jur, R. Kotek, W. E. Krause, J. P. Lavelle, S. I. Salmon; Research Associate Professors: D. P. Griffis, D. B. Thompson; Adjunct Associate Professors: J. P. Casani, G. M. Garland, T. G. Montgomery; Assistant Professors: E. N. Ford, W. Gao, E. Shim, N. R. Vinueza Benitez; Research Assistant Professors: N. Anantharamaiah, G. M. Garland, B. Maze, R. Ormond, B. Yeom; Adjunct Assistant Professors: H. A. Boyter; Teaching Professors: H. Hamouda

Master of Science in Textile Chemistry (MS/TC): The Master of Science in Textile Chemistry degree program, offered by the Department of Textile Engineering, Chemistry and Science (TECS) in the College of Textiles (COT), emphasizes the fundamental principles of chemistry, physics, and mathematical sciences, and applies those to polymer science, dyeing and finishing technology, color science, dye chemistry, and fiber analysis and formation. Some of the active research projects in textile chemistry include study of toxicity and mutagenicity of dyes and pigments, biomedical applications of polymers, surface treatment and finishing of polymers using plasma, color perception and imaging, dye activated solar cells, dyebath modeling and control, polymer and fiber science, and environmental sustainability including pollution prevention. Some of our students opt to co-major in other programs including chemical engineering, chemistry, textile engineering, and biomedical engineering. Our program is highly relevant to many in the chemical, medical, polymer, retail and textile industries, as well as environmental and forensic science. Graduates of Textile Chemistry are recruited by a broad range of employers, including traditional textile areas or even areas outside of textiles, such as research laboratories or the State and Federal Bureaus of Investigation. Some graduates have also gone onto doctoral programs, particularly in fiber and polymer science (FPS) and textile technology management (TTM).

Admission Requirements (MS/TC): Applicants must have must have an undergraduate degree in chemistry or an equivalent degree with demonstrated proficiency in the appropriate calculus-based sciences (such as physics) and core chemistry competencies, including physical chemistry and organic chemistry. If these requirements are not met, additional coursework may be required prior to admission into the program. Applicants are also expected to meet the following minimum requirements: a GPA of 3.0 or First Class Honors in the Bachelor's degree; GRE scores in the 65th percentile; a TOEFL score of 213 for the computer-based, and 80 for internet-based (international students) OR IELTS scores with an overall band score of at least 6.5; and three letters of reference.

Degree Requirements Master of Science in Textile Chemistry (MS/TC): For students on the thesis track, a minimum of 32 credit hours is required to fulfill the degree requirements; a minimum of 15 credit hours (5 courses) must come from the approved textile chemistry offerings, and 9 credit hours (3 courses) from a supporting area (minor), in addition to 2 credit hours of COT Seminar (TC 601) and 6 credit hours of thesis research. For students who choose the Option B (non-thesis) or Distance Education (DE) track, a minimum of 35 credit hours is required; a minimum of 18 credit hours (6 courses) must come from the approved textile chemistry offerings, and 9 credit hours (3 courses) from a supporting area, in addition to 2 credit hours of COT Seminar (TC 601) and 6 credit hours of independent study (TC 630).

Student Financial Support: Although financial aid is limited, some support is available for full-time students in the form of research assistantships, teaching assistantships, or fellowships. Research assistantships are only available for M.S. students in the thesis option, and students should contact individual faculty members in their research interest areas for such opportunities. While students can typically find support by their second semester, they should be prepared to cover all expenses for at least the first semester.

Other Relevant Information: The TECS Department either houses or has access to state-of-the-art facilities for conducting quality research and independent study projects related to this degree program area. Close cooperation between COT faculty and the fiber/textile and allied industries provides students with opportunities for learning and employment.

Click on <u>Graduate Courses - Textile Chemistry</u> for current course information.

Click on **Graduate Courses** -Textile Engineering for current course information.

Click on <u>Graduate Courses -Textile Materials Science</u> for current course information.

Click on <u>Graduate Courses -Textile Technology</u> for current course information.

NCSU Graduate Catalog

Textile Engineering

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Textile Engineering			Y				

GRADUATE FACULTY

Director of Graduate Programs:

M. Pasquinelli, Box 8301, 919/515-9426, <u>melissa pasquinelli@ncsu.edu</u>, Textile Engineering, Chemistry and Science

Named Professors: R. L. Barker, H. S. Freeman, D. Hinks, W. Oxenham, A. E. Tonelli; Named Distinguished Professors: B. Pourdeyhimi; Distinguished Professors: R. J. Spontak; Professors: K. R. Beck, T. G. Clapp, L. I. Clarke, A. M. El-Shafei, T. K. Ghosh, R. E. Gorga, P. J. Hauser, S. M. Hudson, W. J. Jasper, J. A. Joines, M. W. King, M. G. McCord, S. Michielsen, M. Pasquinelli, J. P. Rust, A. M. Seyam, R. Shamey, A. J. Williams, X. Zhang; Adjunct Professors: W. G. O'Neal; Emeritus Named Professors: C. B. Smith; Emeritus Professors: R. A. Barnhardt, A. H. El-Shiekh, P. L. Grady, B. S. Gupta, G. N. Mock, M. H. Theil; Emeritus Distinguished Professors: M. H. Mohamed; Associate Professors: P. Banks-Lee, P. D. Bradford, E. A. DenHartog, G. L. Hodge, J. S. Jur, R. Kotek, W. E. Krause, J. P. Lavelle, S. I. Salmon; Research Associate Professors: D. P. Griffis, D. B. Thompson; Adjunct Associate Professors: J. P. Casani, G. M. Garland; Assistant Professors: E. N. Ford, W. Gao, E. Shim, N. R. Vinueza Benitez; Research Assistant Professors: N. Anantharamaiah, G. M. Garland, B. Maze, R. Ormond, B. Yeom; Adjunct Assistant Professors: H. A. Boyter; Teaching Professors: H. Hamouda

Master of Science in Textile Engineering (MS/TE): The Master of Science in Textile Engineering degree program, offered by the Department of Textile Engineering, Chemistry and Science (TECS) in the College of Textiles (COT), offers unique educational and research opportunities within the domain of textile materials, structures, and technologies, as well as process design. The program is interdisciplinary in nature, drawing upon polymer and fiber science, mathematical sciences, other engineering disciplines, and the physical sciences. Current research activities in textile engineering include inventory and supply chain control, molecular modeling, nonwovens, thermal and protection sciences, polymer and fiber science, biomedical applications of textiles, wearable and smart textiles, textile composites, filtration, nanotextiles, and sustainability. Since this program encompasses such diverse fields of study, many of our students opt to minor or co-major in other programs at NC State, such as statistics, biomedical engineering, chemical engineering, and industrial engineering. Graduates of Textile Engineering are recruited by a broad range of employers, including traditional textile areas such as performance athletic wear or outdoor apparel and equipment, or even areas outside of textiles, such as hospitals, research laboratories, or banks. Some graduates have also gone onto doctoral programs, particularly in fiber and polymer science (FPS) and textile technology management (TTM).

Admission Requirements (MS/TE): Applicants must have an undergraduate engineering degree or demonstrated proficiency in the appropriate calculus-based sciences (such as physics) and technical competencies in areas such as fiber science. If these requirements are not met, additional coursework may be required prior to admission into the program. A background in materials science, engineering mechanics, statistics, or chemical engineering is highly recommended. Formal education in textile engineering or materials science is desired but not required. Applicants are also expected to meet the following minimum requirements: a GPA of 3.0 or First Class Honors in the bachelor's degree; GRE scores in the 65th percentile; a TOEFL score of 213 for the computer-based, and 80 for internet-based (international students) OR IELTS scores with an overall band score of at least 6.5; and three letters of reference.

Degree Requirements Master of Science in Textile Engineering (MS/TE): A minimum of 32 credit hours is required to fulfill the degree requirements. Of the 32 credits, a minimum of 24 credit hours (8 courses) must meet the following two requirements: (1) students must take a minimum of five 3-credit courses at the ≥500 level offered by TECS faculty that have the following prefixes: TE, TMS, TC (PCC), TT, FPS, and TTM; and (2) students must take a minimum of four 3-credit engineering courses at the ≥500 level (i.e., courses offered by an engineering department, which includes courses with the TMS prefix). In addition, two semester credits of COT Seminar (TE 601) are required. Students who choose the thesis option must also take 6 credit hours of thesis research, whereas Option B (non-thesis) students must take 6 credit hours (2 courses) of independent study (TE 630).

Student Financial Support: Although financial aid is limited, some support is available for full-time students in the form of research assistantships, teaching assistantships, or fellowships. Research assistantships are only available for M.S. students in the thesis option, and students should contact individual faculty members in their research interest areas for such opportunities. While students can typically find support by their second semester, they should be prepared to cover all expenses for at least the first semester.

Other Relevant Information: The TECS Department either houses or has access to state-of-the-art facilities for conducting quality research and independent study projects related to this degree program area, including fiber science and textile engineering. Close cooperation between COT faculty and the fiber/textile and allied industries provides students with opportunities for learning and employment.

Click on Graduate Courses -Textile Chemistry for current course information.

Click on Graduate Courses -Textile Engineering for current course information.

Click on Graduate Courses -Textile Materials Science for current course information.

Click on Graduate Courses -Textile Technology for current course information.

NCSU Graduate Catalog

Textile Technology Mgmt

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Fiber and Polymer Science	Y						
Textile Technology Management	Y						

GRADUATE FACULTY

Director of Graduate Programs:

S. Michielsen, Box 8301, 919/515-1414, <u>Stephen_Michielsen@ncsu.edu</u>, Textile Engineering, Chemistry and Science

Named Professors: R. L. Barker, S. Fang, H. S. Freeman, D. Hinks, S. A. Khan, R. E. King, W. Oxenham, A. E. Tonelli; Named Distinguished Professors: B. Pourdeyhimi; Named Distinguished University Professors: A. B. Godfrey, R. B. Handfield, T. J. Hodgson, B. M. Novak, M. Rappa; Distinguished Professors: J. Genzer, R. J. Spontak; Professors: H. Ade, C. M. Balik, K. R. Beck, C. C. Bozarth, C. L. Bumgardner, T. G. Clapp, A. M. El-Shafei, P. S. Fedkiw, R. E. Fornes, T. K. Ghosh, R. E. Gorga, C. B. Gorman, P. J. Hauser, S. M. Hudson, C. L. Istook, W. J. Jasper, J. A. Joines, M. W. King, T. A. Lamar, K. K. Leonas, T. J. Little, M. G. McCord, S. Michielsen, M. M. Moore, M. Pasquinelli, J. P. Rust, A. M. Seyam, R. Shamey, R. A. Venditti, A. J. Williams, J. R. Wilson, X. Zhang; Adjunct Professors: E. G. Loboa-Polefka, K. Mathur, O. J. Rojas; Emeritus Named Professors: S. K. Batra, S. P. Hersh, H. B. Hopfenberg, C. B. Smith, M. W. Suh, S. C. Winchester, C. F. Zorowski; *Emeritus Professors:* R. A. Barnhardt, R. A. Donaldson, A. H. El-Shiekh, R. E. Fornes, P. L. Grady, B. S. Gupta, D. M. Holthausen, G. N. Mock, H. G. Olf, N. C. Powell, S. T. Purrington, W. C. Stuckey, M. H. Theil, C. Tomasino, C. F. Zorowski; *Emeritus Distinguished Professors:* M. H. Mohamed; Associate Professors: K. E. Annett-Hitchcock, P. Banks-Lee, K. A. Barletta, P. D. Bradford, E. A. DenHartog, H. H. Hergeth, G. L. Hodge, J. S. Jur, R. Kotek, W. E. Krause, J. P. Lavelle, L. A. Lucia, L. Pal, L. L. Parrillo-Chapman, L. F. Rothenberg, S. I. Salmon, Y. Xu; Research Associate Professors: D. P. Griffis; Adjunct Associate Professors: J. P. Casani, G. M. Garland, S. B. Moore; *Emeritus Associate Professors:* S. N. Chapman, J. K. McCreery, G. W. Smith; Assistant Professors: E. N. Ford, W. Gao, S. Lim, D. R. Matthews, J. A. Porterfield, E. Shim, M. Suh, N. R. Vinueza Benitez, A. J. West, J. F. Woodbridge; Research Assistant Professors: N. Anantharamaiah, G. M. Garland, B. Maze, B. Yeom; *Teaching Professors:* H. Hamouda, H. L. Nuttle: Lecturers: G. M. Devine

Textile Technology Management is a multidisciplinary program designed to educate students for research and management careers in technology management in the fiber, textile, apparel and related industries complex. The program is designed to give the students a breadth of knowledge

of the materials and technologies employed in the industries as well as the quantitative and analytical tools of management.

Admission Requirements: Students majoring in textiles; industrial, systems and manufacturing engineering; statistics; operations research; computer science; economics; consumer economics; marketing; and business administration, and having an average in their undergraduate studies of 3.5/4.0 and a Master's degree will normally qualify for admission. Exceptionally qualified students (3.75/4.0 undergraduate GPA) may be admitted directly without a Master's degree.

Doctoral Degree Requirements: Fixed credit-hour requirements for the Doctor of Philosophy degree are 72. (Up to 18 hours from an M.S. may be applied against the 72.) Students are admitted to candidacy for the Ph.D. degree after passing a prescribed group of courses, completing a scholarly critique of existing knowledge in the field of specialization, and orally defending a research proposal. They must also have demonstrated proficiency in English technical writing course and, depending on the nature of their research interests, may also be required to demonstrate a reading knowledge of one foreign language.

Student Financial Support: Financial aid in the form of Graduate Research Assistantships, Teaching Assistantships, or other assistantships and fellowships is available to a limited number of students.

Course Offerings: Extensive use may be made of graduate course offerings in other colleges on campus when developing the minor field. See departmental listing for descriptions.

Click on Graduate Courses - Textile Technology Management for current course information.

Click on Graduate Courses - Textile Technology for current course information.

NCSU Graduate Catalog

Toxicology

Degrees Offered:

Program Title	Ph.D.	Ed.D.	M.S.	M.A.	Master of	M.Ed.	MFA
Toxicology	Y		Y		Y		

GRADUATE FACULTY

Director of Graduate Programs:

S. W. Kullman, Box 7633, swkullma@ncsu.edu, Biological Sciences

Named Professors: W. G. Cope, H. B. Patisaul; Named Distinguished Professors: R. R. Anholt, R. Roe; Professors: K. B. Adler, R. E. Baynes, J. C. Bonner, M. Breen, D. Buchwalter, D. J. Burke, J. M. Cullen, H. M. Hassan, J. M. Horowitz, M. Hyman, S. W. Kullman, S. M. Laster, J. M. Law, G. A. LeBlanc, E. G. Nichols, E. F. Rissman, P. L. Sannes, D. Shea, R. C. Smart, M. K. Stoskopf, J. Tsuji, Y. Tsuji; Research Professors: S. M. Belcher, A. R. Brody; Adjunct Professors: D. W. Threadgill, D. C. Zeldin; Emeritus Professors: E. Hodgson, R. B. Leidy, N. A. Monteiro-Riviere, J. F. Roberts; Associate Professors: J. A. Hoppin, C. Hoyo, C. J. Mattingly, N. M. Nascone-Yoder, D. M. Reif, M. Rodriguez-Puebla; Adjunct Associate Professors: S. E. Fenton; Assistant Professors: D. L. Aylor, M. S. Bereman, M. A. Cowley, D. Fourches, A. J. Planchart; Research Assistant Professors: J. R. Hall, D. A. Skaar; Adjunct Assistant Professors: S. E. Fenton, R. L. Langley

The Toxicology Program provides course work and research training to prepare prospective toxicologists and environmental health scientists for careers in academia, government, and industry. Research in the program spans an array of topics ranging from the molecular to population level consequences of toxicant exposure. Areas of research excellence within the program include elucidating relationships among cell signaling processes and stressor-induced disease and toxicity, establishing mechanisms of system-specific toxicity, using physiological and genomic approaches to understand differences in species and individual susceptibility to environmental contaminants, and unraveling gene-environment interactions. Some specific research areas include: apoptosis, endocrine disruption, trace metal bioaccumulation and detoxification, oxidative stress/gene regulation/cell toxicity, asthma and lung fibrosis, cancer and mutagenesis, ecotoxicology, developmental abnormalities, chemical exposure assessment and environmental epidemiology. Some examples of the types of environmental agents that are being investigated include chemical carcinogens, trace metals, pesticides, particulates metals, endocrine disruptors, nanoparticles and UVB radiation.

Admission Requirements: Prospective students should have a strong background in the biological and physical sciences with a minimum undergraduate grade point average of 3.0 (on a 4.0 scale) and a minimum Quantitative GRE score in the 70th percentile. GRE subject tests are not required. International students whose primary language is not English must submit TOEFL scores. A written statement should describe the applicants academic and career goals as well as their area of interest. All applications are reviewed by an admissions committee. Students are encouraged to submit applications no later than January 15 for Fall admission.

Master of Science Degree Requirements: The M.S. is a research-oriented degree requiring a minimum of 30 credit hours and a written thesis. At least 20 credit hours must be graduate-level courses and a core curriculum is required.

Master of Toxicology Degree Requirements: The MTOX degree is a non-research degree designed for those interested in pursuing non-research careers in toxicology and environmental health science, and/or working professionals seeking to further their education and advance their careers. To accommodate working professionals the MTOX degree can be pursued on a part-

time basis. A minimum of 30 credit hours is required, with at least 14 credit hours in toxicology courses.

Doctoral Degree Requirements: The Ph.D. program is designed to train students to become independent scholars capable of conducting unsupervised and original research. Students enroll in a core curriculum similar to that of the M.S. degree and additional courses as determined by his/her advisory committee. Normally a total of 72 credit hours is required, with the majority of these credits being dissertation research. Students must pass both a written and oral preliminary exam prior to advancing to Ph.D. candidacy. A doctoral dissertation presenting the students original research is written and defended in a final oral examination.

Student Financial Support: Financial assistance is available for qualified applicants through traineeships, fellowships, teaching assistantships and research assistantships.

Other Relevant Information: Students pursuing either the M.S. or Ph.D. degree may elect to specialize in General Toxicology, Environmental Toxicology, or Molecular and Cellular Toxicology. More details can be obtained on the Environmental and Molecular Toxicology web site.

Click on **Graduate Courses** for current course information.

Courses from Associated Departments

BIT 510 Core Technologies in Molecular and Cellular Biology

BIT 567 Polymerase Chain Reaction Technologies

BIT 568 Genome Mapping

BIT 569 RNA Purification and Analysis

BCH 553 Biochemistry of Gene Expression BCH 701 Macromolecular Structure

BCH 703 Macromolecular Synthesis and Regulation BCH 705 Molecular Biology of the Cell

BCH 761 Advanced Molecular Biology of the Cell

CBS 754 Principles of Analytical Epidemiology CBS 762 Principles of Pharmacology

CBS 770 Cell Biology

CBS (TOX) 771 Cancer Biology

CBS 795A Special Topics: Veterinary Pathology I. General Pathology GN 820 Professional Development

HS 707 Environmental Stress Physiology MB 751 Immunology

MEA 540 Principles of Physical Oceanography MEA 750 Marine Benthic Ecology

PHY 503 General Physiology I PHY 504 General Physiology II

PHY 780 Mammalian Endocrinology

ZO 509 Ecology of Stream Invertebrates

ZO 513 Comparative Physiology

ZO 524 Comparative Endocrinology

Courses not listed above but approved by the students advisory committee can also be included toward the 6 credit hour elective requirement. Course descriptions can be found at the Registration and Records website.

NCSU Graduate Catalog

Water Resources (Minor Program)

Josh Heitman, Chair Soil Science 3410A Williams Hall NCSU Box 7619

Phone: 919.513.1593

Email: jlheitman@ncsu.edu

The interdisciplinary, interdepartmental graduate minor in water resources is designed for students majoring in the many disciplines of natural resources, science, engineering, technology, and social sciences that are relevant to water resources. The minor exposes students to water resources courses and faculty members within and outside their major fields of study.

The graduate minor in water resources (WR) requires successful completion ($\Box B$ - \Box or better in each individual WR course, GPA of 3.0 or better across all WR courses counted toward the minor) of at least 9 credits of WR courses chosen from the lists below. At least 3 of the 9 credits (for M.S. students) or 6 of the 9 credits (for Ph.D. students) must be from outside the student \Box s major department. For M.S. students (not Ph.D. students), up to 3 credits at the 400-level may be included if these credits are from outside the student \Box s major department. For students earning an M.S. before enrolling in a Ph.D. program, courses taken to satisfy a WR minor in the M.S. program can not be counted toward a WR minor in the subsequent Ph.D. program. However, WR courses taken during the M.S. program may count toward a WR minor in the subsequent Ph.D. program if the M.S. program did not include a WR minor.

WATER RESOURCES COURSES

Hydrological and Meteorological Aspects of Water Resources

BAE 502 Instrumentation for Hydrologic Applications

BAE 570 Soil Water Movement

BAE 576 Watershed Monitoring and Assessment

BAE 577 Introduction to the Total Maximum Daily Load Program

BAE 579 Stream Channel Assessment and Restoration

BAE 581 Open Channel Hydraulics for Natural Systems

BAE 583 Ecohydraulics and River Corridor Function

BAE 584 Introduction to Fluvial Geomorphology

BAE(SSC) 771 Theory of Drainage-Saturated Flow

CE 584 Hydraulics of Ground Water

CE 586 Engineering Hydrology

CE 607 Water Resource and Environmental Engineering Seminar

FOR(NR) 420/520 Watershed and Wetlands Hydrology

MEA 455 Micrometeorology

MEA 481 Principles of Geomorphology

MEA 485 Introduction to Hydrogeology

MEA 513 Radar Meteorology

MEA 585 Physical Hydrogeology

MEA 706 Meteorology of the Biosphere

MEA 715 Dynamics of Mesoscale Precipitation System

SSC 470/570 Wetland Soils

SSC 511 Soil Physics

Water Quality Aspects of Water Resources

BAE 473 Introduction to Surface/Water Quality Modeling

BAE(SSC) 573 Introduction to Surface Hydrologic/Water Quality Modeling

MEA 760 Biogeochemistry

MEA 763 Geochemistry

MEA 785 Chemical Hydrogeology

SSC 442 Soil and Environmental Biogeochemistry

SSC 521 Soil Chemistry

SSC 722 Advanced Soil Chemistry

Water Engineering and Management Aspects of Water Resources

BAE 471 Land Resources Environmental Engineering

BAE 472/572 Irrigation and Drainage

BAE 574 DRAINMOD: Theory and Application

BAE 575 Design of Structural Stormwater Best Management Practices

BAE 578 Agricultural Waste Management

BAE 580 Introduction to Land and Water Engineering

CE 484 Water Supply and Waste Water Systems

CE 571 Physical Principles of Environmental Engineering

CE 574 Chemical Principles of Environmental Engineering

CHE 575 Advances in Pollution Prevention: Environmental Management

CS(HS,SSC,TOX) 725 Pesticide Chemistry

CS(HS,SSC,TOX) 727 Pesticide Behavior and Fate in the Environment

NR 521 Wetland Assessment, Delineation, and Regulation

PCC 401 Manufacturing and its Impact on Safety, the Environment, and Society

SSC 562 Environmental Applications of Soil Science

WPS 725 Pollution Abatement in Forest Products Industries

WPS 750 Wastewater Treatment in the Paper Industry

Biological and Ecological Aspects of Water Resources

BIO 441 Biology of Fishes

BIO 442 Biology of Fishes Laboratory

FOR 595 Mountain Ecohydrology

FW(BIO) 420 Introduction to Fisheries Science

FW(ZO) 586 Aquaculture I

FW(ZO) 587 Aquaculture I Laboratory

MEA 756 Ecology of Fishes

PB(ZO) 760 Principles of Ecology

PB(MB) 774 Phycology

SSC 461 Soil Physical Properties and Plant Growth

ZO 519 Limnology

Legal, Institutional, and Economic Aspects of Water Resources

EC(ARE) 436 Environmental Economics

ECG 515 Environmental and Resource Policy

ET 460 Practice of Environmental Technology

LAR 430 Site Planning

LAR 512 Landscape Resource Management

NR 460 Renewable Natural Resource Management and Policy

NR 571 Current Issues in Natural Resource Policy

NR 484 Environmental Impact Assessment

PA 550 Environmental Policy

Women's and Gender Studies (Minor Program)

Karey Harwood, PhD

Coordinator, Women's and Gender Studies

Associate Professor Department of Philosophy and Religious Studies

Phone: 919-515-6383

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The minor provides graduate students in the humanities, social sciences and sciences with the theories and the methodologies to study women and gender relations. The minor is intended to support and further students' research in their own field.

- Nine hours of graduate credit are required with a B or better in each course.
- No more than three hours of course work may overlap between the major department coursework requirement and the Women's and Gender Studies minor. Students may choose from the courses listed on the website and/or a list of approved special topics courses.
- Because the Minor is an interdisciplinary one, at least one of the courses needs to be in a field different from that of the graduate program in which the student is enrolled.
- All courses must be taught by the Women's and Gender Studies Affiliated Faculty.
- An Affiliated Faculty member (not in the field of the degree graduate program) must sit on the master's or dissertation committee.

The Department of Agricultural and Extension Education offers a Graduate Certificate in Agricultural and Extension Education. The program focuses on developing knowledge and skills needed to be effective teachers of agriculture in the public schools and community colleges or to work as an educator with the Cooperative Extension Service or in other non-formal educational settings such as public gardens, nature centers and in international development. Admissions: Students apply online by visiting the Graduate School's website and completing an ApplyYourself online application. Students currently in a graduate degree program should contact the program director for information regarding adding the certificate program to an existing degree program.

Requirements: The certificate program involves completion of 15 credit hours and the preparation of a professional portfolio. The career goals of the student will determine which sequence of courses to take.

Agricultural Education Focus	Extension Education Focus
AEE 500 Agricultural Education, Schools and	AEE 501 Foundations of Agricultural and
Society	Extension Education
AEE 501 Foundations of Agricultural and	AEE 521 Program Planning in Agricultural and
Extension Education	Extension Education
AEE 503 Youth Program Management	AEE 523 Adult Education in Agriculture
AEE 522 Occupational Experience in	AEE 533 Leadership and Management of
Agriculture	Volunteers in Agricultural and Extension
	Education
AEE 524 Coordinating the High School	AEE 560 Organizational and Adminstrative
Agricultural Education Program	Leadeship in Agricultural and Extension
	Education
AEE 529 Curriculum Development in	AEE 577 Evaluation in Agricultural and
Agricultural and Extension Education	Extension Education
AEE 535 Teaching Agriculture in Secondary	AEE 705 International Agricultural
Schools	Development
AEE 641 Practicum in Agricultural and	AEE 641 Practicum in Agricultural and
Extension Education	Extension Education
AEE 735 Effective Teaching in Agriculture and	
Life Sciences	

Students who are are interesting in obtaining teacher licensure from the state of North Carolina should make their intentions known to the program director so that specific state requirements are met. Directions for preparing the professional portfolio can be obtained from the program director.

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The Administration and Leadership certificate is closed to new student enrollment. Please visit the Department of Youth, Family, and Community Sciences website for information on our current certificate offerings.

The Department of Youth, Family, and Community Sciences (YFCS) at North Carolina State University is proud to offer graduate distance education programs designed to prepare and strengthen current and future professionals. The Youth, Family, and Community Sciences online programs create and advance the careers of those who work with youth and/or families in community-based settings.

Admissions: Students apply online at http://www.ncsu.edu/grad/applygrad.htm.

Requirements: A Graduate Certificate in Administration and Leadership – Family and Youth Programs requires a total of 12 credit hours. Nine (9) credit hours are required courses, with the remaining 3 credit hours of electives. All courses are offered online only.

Required Courses (9 credit hours)

FYD 550 Youth and Family Professionals as Leaders FYD 554 Collaborations and Partnerships in Youth and Family Settings FYD 556 Organizational Systems in Youth and Family Settings

Electives (3 credit hours)

Approved course in Family Life and Youth Development (FYD)

The Graduate Certificate in Climate Adaptation program at NC State University provides accredited, academic training in the emerging field of climate adaptation. The online, twelve credit program is designed to provide mid-career professionals and entry-level students with technological skills and specialization in climate adaptation. The certificate is a fully accredited credential and a potential path toward the Climate Adaptation degree program. Coursework includes Fundamentals of Climate Change Science, Climate Risk Analysis, Climate Communication and Introduction to Geographic Information Systems.

Admission Requirements: Applicants must meet one of the 3 following requirements:

- Be a graduate of an accredited four-year college or university, and have a GPA of at least 3.0 on a 4-point scale in their last 60 credit hours of undergraduate study.
- Have a Master's degree.
- Be a degree student in good standing in a NC State University graduate program.

We recommend that students in a NC State University graduate program may apply after completing two of the courses required for the graduate certificate program with at least B grades. The graduate certificate program Director will manage the admissions process in consultation with the MEAS Director of Graduate Programs.

Provisional Admission: Applicants who do not meet the graduate certificate program requirements for full admission may be admitted provisionally based on the quality of their letters of recommendation and other criteria at the discretion of the Certificate Program Director and MEAS Director of Graduate Programs. Students who are admitted provisionally must maintain a 3.0 GPA in order to obtain full admission into the certificate program.

Program of Study: The graduate certificate requires a minimum of 12 hours, and includes the following courses:

- MEA 517 Fundamentals of Climate Change Science
- MEA 518 Climate Risk Analysis
- MEA 519 Barriers to Climate Change Literacy
- GIS 510 Introduction to Geographic Information Science

The department of Leadership Policy, Adult and Higher Education (AHE) within the College of Education at North Carolina State University offers a graduate certificate program in Community College Teaching.

The program focuses on developing the knowledge and skills necessary to design and deliver course-related content through technology-enhanced learning environments for faculty who teach in community colleges and other post secondary settings or plan on teaching in the near future. The courses developed for the graduate certificate will enhance faculty abilities in both online and classroom environments. The key goal for the online Graduate Certificate Program in Community College Teaching is to provide high quality content and instruction for the systematic development of instructional expertise for community college and other post-secondary faculty.

Curriculum. The Graduate Certificate Program in Community College Teaching consists of 15 credit hours of coursework (five courses, three credits each). The courses are listed below.

Required:

EAC 559 The Adult Learner

EAC 538 Instructional Strategies in Adult and Community College Education

EAC 560 Assessment and Evaluation in Adult and Higher Education

EAC 700 Community College and Two-year Postsecondary Education

EAC 539 Teaching in an Online Environment

For more information about the program and for application procedures, please see the CCTeach Online website.

The Graduate Certificate in City Design is a joint program between the School of Architecture and the Department of Landscape Architecture. In addition, the Graduate Certificate in City Design is an interdisciplinary and inter-university initiative, reflecting the nature of city design practice. The program aims to bring together students and faculty from landscape architecture, architecture, and city and regional planning into an interactive and team-based learning context.

The City Design program promotes design inquiry and application at the scale of the city for students and practitioners of architecture, landscape architecture, and city and regional planning. The program's objectives are to consider the human condition, particularly in making signification urban places; design integrated system of movement with increased accessibility; promote a greater mix of uses and amenities within a well-scaled urban fabric; foster new opportunities for energy production, collection and saving at the local scale; define new means of 'greening' the city; and capture greater senses of identity, meaning, and quality within the city fabric.

Admissions: Applicants must complete an application form to be considered for the certificate program. To qualify for admission to the certificate program, students must be enrolled in (or have completed) a professional program in architecture. At the time of application, students must have a 3.00 grade point average (GPA) in their professional degree program.

Requirements: Students must complete 15 hours of coursework from the course menu, as specified in the certificate application, and have a minimum of 3.00 GPA on all certificate coursework. All grades on courses taken towards the certificate program in courses numbered 400 and above are included in the GPA. Courses at the 300 level and below are not eligible for certificate credit and subsequently do not affect the graduate GPA.

The minimum grade to receive certificate credit can be no lower than B-. Students who take letter-graded 400-, 500-, and 700-level courses do not have the option of taking the courses for 'credit only' if they intend for the course to be part of the graduate certificate. Transfer credit from other institutions is not allowed for the graduate certificate. All course work must be registered through NC State University.

All certificate requirements must be completed within four (4) calendar years, beginning with the date that the student commences courses applicable to the certificate, unless a more restrictive time limit has been established by the program or academic college/school.

A student may obtain more than one certificate. Each certificate must have a least nine (9) credit hours that are unique to it.

Other Information: Students in City Design certificate program will join an academic and professional community that offers a broad range of extracurricular activities, including the College of Design annual Urban Design Conference, visiting lecturers, colloquia, and *City Forum*, a regularly scheduled series of brown bag discussions coordinated by the City of Raleigh Urban Design Center.

Note that academic success might have a strong bearing on admission to a degree program, but

completion of the certificate program in no way guarantees entry into a graduate degree program. For more information regarding course requirements and the application process, please contact the certificate program coordinator.

Graduate Certificate Program (online): Our innovative online program prepares school teachers, administrators, staff, advisors, tutors in schools and universities, human service workers, and individuals interested in counseling work to advocate and support students, their families, clients and local communities. Our certificate program allows students to learn in a flexible environment, with flexible online classwork, without the hassle of traffic and on-campus parking. Students will meet online each week for a 90-minute interactive discussion with the professor, instructors and classmates, in order to stay connected and challenged. The certificate program alone does not prepare students to work as professional counselors. In order to work in professional counseling, additional classes, training and licensure will be required through a master's degree program.

Admission Requirements: Applicants should have a 3.0 GPA but may be admitted provisionally based on related graduate classes completed in the field of education, human services or training and development, and, ultimately, by earning at least a "B" (3.0) average in the first GCCE class.

- Completed online Graduate School application and admission fee
- Resume outlining education and work experience

Admission to the GCCE online program takes place in the spring for a summer start. Rolling base admissions are possible if seats are available. Email us at ncsu_gcce@ncsu.edu with any questions.

Graduate Certificate in Counselor Education Requirements: Students admitted to this program are required to complete four online courses: ECD 510 Orientation to Professional Counseling, Identity, and Ethics, ECD 530 Theories of Counseling, ECD 524 Career Counseling, and ECD 525 Multicultural Counseling.

The Graduate Certificate in Consumer Textile Product Design and Development (GCCTPDD), offered by the Department of Textile and Apparel, Technology and Management, will provide NC State graduate students the opportunity to develop recognized academic credentials in Consumer Textile Product Design and Development in addition to their major area of graduate study. Also it will offer non-degree graduate-level students the opportunity to develop recognized advanced expertise in Consumer Textile Product Design and Development.

Applications: New applicants to the university must submit a Program Application, a resume identifying educational preparation and work experiences, and official transcripts of all undergraduate and graduate course work. You must apply online through the Graduate School application portal. Prior to completing the first course after being accepted into the program, students prepare and submit two copies of a contract using the Certificate Contract Application. The contract includes a statement of career goals, a rationale for completing the certificate program, and a timeline for certificate completion. Students can always elect to review their application with the Certificate Coordinator prior to contract preparation.

Academic Requirements: Applicants must meet one of the three following requirements:

- Be a graduate of an accredited four-year college or university, and have a GPA of at least 3.0 on a 4-point scale in their last 60 credit hours of undergraduate study;
- Be a degree student in good standing in an NC State University graduate program;
- Have a Master's degree.

Program of Study: The Graduate Certificate in Consumer Textile Product Design and Development requires a minimum of 15 hours, and includes the following courses:

Core Courses (6 hours)

TTM 573 Management of Textile Product Development (3 hours)

TTM 585 Market Research in Textiles (3 hours)

Advanced Courses (minimum 9 hours)

TTM 515 Apparel Production (3 hours)

TTM 517 Advanced Computer-Aided-Design for Fashion (3 hours)

TT 570 Textile Digital Design and Technology (3 hours)

TT 571 Professional Practices in Textile Design and Technology (3 hours)

TTM 510 Apparel Technology Management (3 hours)

TTM 632 Independent Study in Consumer Textile Product Design and

Development (3 hours)

For more details about the Graduate Certificate in Consumer Textile Product Design and Development, please visit the <u>program website</u>.

The Department of Biological and Agricultural Engineering offers a Graduate Certificate Program in Design and Analysis of Environmental Systems: Watershed Assessment and Restoration.

Objectives

- 1. Provide a focus and formal program for students from many disciplines to pursue training in the technical and engineering aspects of designing and analyzing environmental systems with an emphasis on the watershed-scale.
- 2. Provide students the opportunity to develop a solid foundation in engineering systems targeted at environmental issues, particularly related to non-point sources and their impact on water quality at the watershed-scale.
- 3. Provide practicing engineers and other professionals a source of graduate level engineering education in the environmental field.

Admission Requirements: Applicants must have successfully completed an accredited undergraduate engineering program with a GPA of 3.0 (based on a 4.0 scale), or with an overall undergraduate GPA of at least 2.8 coupled with a 3.0 or higher in the undergraduate major, or be currently enrolled in a graduate engineering program. Applicants with a four-year undergraduate science degree who have successfully completed (with a C or better) calculus, differential equations, physics and chemistry will also be considered. A program that includes fluid mechanics or hydraulics is highly recommended. Environmental professionals who do not meet the above criteria may also qualify if appropriate experience can be demonstrated.

Program Requirements: A minimum of 12 hours of coursework selected from the list below. One course can be selected from outside of BAE (up to 2 credit hours), but at least 9 credit hours must be BAE courses.

At least 9 hours from the following:

BAE 502 Instrumentation for Hydrologic Applications

BAE 528 Biomass to Renewable Energy Processes

BAE 535 Precision Agriculture Technology

BAE 573 Hydrologic and Water Quality Modeling

BAE 574 Drainmod

BAE 575 Design of Structural Stormwater Best Management Practices

BAE 576 Watershed Monitoring and Assessment

BAE 578 Agricultural Waste Management

BAE 579 Stream Channel Assessment and Restoration

BAE 580 Introduction to Land and Water Engineering

BAE 581 Open Channel Hydraulics for Natural Systems

BAE 582 Risk and Failure Assessment of Stream Restoration Structures

BAE 583 Ecohydraulics and River Corridor Function

BAE 585 Integrating AutoCAD, Civil3D, and GIS

BAE 590 Introduction to Fluvial Geomorphology

BAE 590 GIS Applications in Precision Agriculture

BAE 590 Wetland Design

BAE 590 Water / Nutrient Management for Sustainability

BAE 590 Biogeochemical Processes

BAE 771 Theory of Drainage – Saturated Flow

BAE 774 Theory of Drainage - Unsaturated Flow

Up to 3 credit hours can be selected from the following:

CE 580 Flow in Open Channels CE 584 Hydraulics of Groundwater

CE 586 Engineering Hydrology

CE 775 Modeling and Analysis of Environmental Systems

CE 776 Advanced Water Management Systems

CE 784 Ground Water Contaminant Transport

CE 785 Urban Stormwater Management

SSC 511 Soil Physics

SSC 562 Environmental Applications of Soils

SSC 570 Wetland Soils

The Certificate in Digital Humanities is a designed for students from any discipline to construct a curriculum in digital humanities training and project work. The certificate is currently coordinated in the English department with participation across CHASS and other colleges.

The Graduate Certificate consists of a student-proposed curriculum of four 3-credit courses which must collectively satisfy the program's three requirements: contexts, training, and applications. In consultation with the coordinator, students can propose their own tracks through the certificate drawing from a broad array of approved courses at NC State as well as at UNC and Duke, as part of the Triangle Digital Humanities Network. Rather than insisting on a prescriptive definition and preset curriculum for "digital humanities," this certificate program encourages students to adapt course offerings in digital humanities or digital media to their own evolving research and professional interests in any variety of fields.

To qualify for admission to the Graduate Certificate in Digital Humanities, students must be enrolled in, or have completed, a Master's or PhD program at an accredited university. Applicants can be either non-degree or degree students. Degree students must have at the time of application a 3.00 grade point average in their graduate degree program. Non-degree students must have a final grade point average that is at least 3.00. Current degree students in English or CRDM may include no more than six (6) credits from the Certificate program in their degree program. Current degree students in History can apply up to nine (9) towards a doctorate. Students seeking the certificate from other programs must consult with those graduate coordinators to confirm allowed credits toward degree. The certificate will accept up to three hours of transfer credit from courses included in the curriculum. All GCP requirements must be completed within three (3) calendar years beginning on the date the student commences applicable courses.

Curriculum: Courses from which applicants can develop a proposal for admission to the program.

NC State University:

Department of English, CHASS

ENG 506 Verbal Data Analysis

ENG 519 Online Information Design and Evaluation

ENG 582 Introduction to Digital Humanities

ENG 583 Digital Media Theory *

ENG 583 Introduction to Humanities Physical Computing *

ENG 583 Emerging Genres

ENG 584 Studies in Linguistics: Laboratory and Computational Tools

CRD 702 Rhetoric and Digital Media

Department of History, CHASS HI 534 History and Digital Media HI 599 The Practice of Digital History Department of Communication, CHASS COM 537 Gaming and Social Networks

COM 547 Mobile Technologies and Social Practices

Department of Computer Science, COE**

CSC 116 Introduction to Computing - Java

CSC 281 Foundations of Interactive Game Design

Department of Art + Design, COD

ADN 419 Multimedia and Digital Imaging***

ADN 423 Digital Modeling

ADN 502 Advanced Visual Laboratory***

ADN 503 Graduate Seminar in Art and Design

ADN 561 Digital Animation and Imaging Seminar***

College of Education (CED)

ECI 511 Computer Applications and Curriculum Integration

ECI 512 Emerging Technologies for Teaching and Learning

ECI 513 Teaching and Learning with Digital Video

ECI 514 Multimedia Design and Applications in Instruction

ECI 515 Online Collaborations in Education

ECI 516 Design and Evaluation of Instructional Materials

ECI 546 New Literacies and Media

ECI 717 Advanced Multimedia Design and Applications in Instruction

- * These special topics courses will be turned into permanent courses this spring, 2013-14.
- ** Courses at the 200-level cannot count toward the certificate's credit hours but may be elected.
- *** These courses have prerequisites in the College of Design: ADN 419 requires D105 and ADN 219; ADN 561 requires AND 460 and ADN 419.

Additional courses available at UNC Chapel Hill:

School of Information and Library Sciences (SILS)

INLS 490 Usability Engineering

INLS 512 Applications of Natural Language Processing

INLS 613 Text Mining

INLS 720 Metadata

INLS 740 Digital Libraries

INLS 890 Making the Humanities Digital

Journalism & Mass Communication

JOMC 491 Mobile App Design and Development

JOMC 581 Multimedia Design

JOMC 582 Interactive Multimedia Narratives

JOMC 583 Multimedia Programming and Production

JOMC 584 Documentary Multimedia Storytelling

JOMC 585 3D Design Studio JOMC 586 Intermediate Multimedia

American Studies AMST 840 Digital Humanities/Digital History AMST 850 Digital Humanities Practicum

For course descriptions, please refer to the NCSU listing of courses as well as <u>other DH courses</u> at Triangle institutions.

For further information, see the **DH** certificate website.

Graduate students and working professionals can now earn a new credential to kick-start or advance their career in the biopharmaceutical industry. Applications are currently being accepted for two new BTEC graduate certificate programs. The Downstream Biomanufacturing graduate certificate offers NC State graduate students and working professionals the opportunity for hands-on learning in BTEC's industry-scale simulated cGMP facilities.

Each certificate requires 12 hours of graduate coursework, which can be transferred to the Master of Biomanufacturing program. The majority of BTEC's graduate courses are offered in the evening or online to better accommodate working professionals.

Admission Requirements: Applicants must apply to the Graduate School http://www.ncsu.edu/grad/applygrad.htm. Those applicants who are currently enrolled in an NC State graduate program need only provide the Graduate Student Certificate Plan Data Entry forms, http://ncsu.edu/grad/faculty-and-staff/docs/grad-cert-plan-data-entry.pdf. An application for acceptance into a certificate programs is required for all new applicants once the student has:

- 1. either have graduated with a baccalaureate degree in a science or engineering discipline with a minimum GPA of 3.0 or
- 2. have complete one or more 500+ level BEC courses which satisfy the certificate requirement with a grade of B- or better on the first enrollment in every course completed.

Certificate Degree Requirements: To earn the Graduate Certificate in Downstream Biomanufacturing, students must complete the following list of core courses and complete a minimum total of 12 credit hours. The grade in each course for the Certificate must either be Bor higher, or CR (600-level courses only), and the over-all GPA for the Certificate courses must be 3.00 minimum.

Transfer credit from other institutions will not be allowed for the Certificate. All course work must be registered through NC State University.

Required Unique Courses (9 credits total)

BEC 532 Biological processing science (2 credits) BEC 536 Introduction to downstream process development (2 credits) BEC 585 cGMP downstream operations (2 credits)

BEC 575 Global Regulatory Affairs (3 credits)

Additional Courses (Minimum 3 credits total)

MBA 554 Project Management (3 credits) or ISE 589 Project Management for Engineers (3 credits)

BEC 577 Advanced Biomanufacturing and Biocatalysis (3 credits)

BEC 515 Biopharmaceutical Product Characterization Techniques (2 credits)

CHE 752 Separation Processes for Biological Materials (3 credits)

The certificate in Downstream Biomanufacturing requirements must be completed within four (4) calendar years, beginning with the date the student commences courses applicable to the Certificate. Students who complete the certificate in Downstream Recovery and Purification may obtain more than one certificate. However, each certificate must have at least nine (9) hours which are unique to it.

Other Relevant Information: A unique, cross-disciplinary instructional center, the Golden LEAF Biomanufacturing Training and Education Center (BTEC) provides educational and training opportunities to develop skilled professionals for the biomanufacturing industry and create the best-trained, most industry-focused workforce possible.

The graduate certificate program in Environmental Assessment provides students and professionals the opportunity to develop recognized academic credentials and advanced expertise in Environmental Assessment. The certificate program provides excellent opportunities for practicing environmental professionals to stay abreast of new technologies and current government regulations.

The curriculum consists of 12 credit hours selected from the required course listing for the MEA degree. Students may transfer up to 12 credit hours from the Certificate into the Masters of Environmental Assessment (MEA). Students may earn the Certificate as a stand-alone credential or as part of a graduate degree and may apply for entry into the MEA degree while in the Certificate program.

Admission Requirements: Baccalaureate degree. Application information and requirements for award of a certificate are listed on the <u>Environmental Assessment Certificate website</u>. Students can start this certificate in Fall or Spring semesters.

Certificate Requirements: Award of a certificate requires a GPA of 3.0 or better for the certificate courses (required and elective) and a grade of B- or better in all of the certificate courses. See the Environmental Assessment Certificate website for a detailed list of courses.

Other Relevant Information: The Certificate is entirely online.

The Graduate Certificate in Energy and Technology in Architecture provides students the opportunity to focus their elective studies through courses and design studio(s) that concentrate on building energy systems along with other building systems.

The program's objectives are to provide educational opportunities for architecture graduate students who wish to acquire knowledge and skills in the design and operation of building system at site and building levels, with an emphasis on energy and materials; to advocate for the importance of energy efficiency over the entire life cycle of a building; and to make our students more competitive in the fields of architectural practice, building engineering, and construction.

This certificate program also provides unique interdisciplinary academic and research opportunities among the College of Design, programs within the College of Engineering, NC Solar Center, and building design industries/organizations (i.e. architecture, engineering, general contracting, real estate companies, and public policy agencies).

Admissions: Applicants must complete an application form to be considered for the certificate program. To qualify for admission to the graduate certificate in Energy and Technology in Architecture, students must be enrolled in (or have completed) a professional program in architecture. At the time of application, students must have a 3.00 grade point average (GPA) in their professional degree program.

Requirements: Students must complete 15 hours of coursework from the course menu, as specified in the certificate application, and have a minimum of 3.00 GPA on all certificate coursework. All grades on courses taken towards the certificate program in courses numbered 400 and above are included in the GPA. Courses at the 300 level and below are not eligible for certificate credit and subsequently do not affect the graduate GPA.

The minimum grade to receive certificate credit can be no lower than B-. Students who take letter-graded 400-, 500-, and 700-level courses do not have the option of taking the courses for 'credit only' if they intend for the course to be part of the graduate certificate. Transfer credit from other institutions is not allowed for the graduate certificate. All course work must be registered through NC State University.

All certificate requirements must be completed within four (4) calendar years, beginning with the date that the student commences courses applicable to the certificate, unless a more restrictive time limit has been established by the program or academic college/school.

A student may obtain more than one certificate. Each certificate must have a least nine (9) credit hours that are unique to it.

Other Information: Students in this certificate program will become part of an academic and professional community that offers a broad range of extracurricular activities, including the NC Solar Center GreenBuild Lecture Series, visiting lecturers, and colloquia.

Note that academic success might have a strong bearing on admission to a degree program, but completion of the certificate program in no way guarantees entry into a graduate degree program. For more information regarding course requirements and the application process, please contact the certificate program coordinator.

The Graduate Certificate in Finance is a one to two year program that is designed for graduate students at NC State as well as working professionals in the Research Triangle community. They will obtain advanced skills in capital budgeting, managing risk, and asset valuation.

Admissions requirements: Graduate students at NC State must be in good standing and must submit an application to the certificate program that will be reviewed and approved by the coordinator. Students not attending NC State must have completed a baccalaureate degree. A minimum GPA of 3.0 in undergraduate and graduate work combined is required for admission to the program. Those with less than a 3.0 may be admitted provisionally. Provisionally admitted students must initially take MBA 520 and earn a grade of B (3.0) or better.

The Family Life Coaching certificate is closed to new student enrollment. Please visit the Department of Youth, Family, and Community Sciences website for information on our current certificate offerings.

The Department of Youth, Family, and Community Sciences (YFCS) at North Carolina State University is proud to offer graduate distance education programs designed to prepare and strengthen current and future professionals. The Youth, Family, and Community Sciences online programs create and advance the careers of those who work with youth and/or families in community-based settings.

Admissions: Students apply online at http://www.ncsu.edu/grad/applygrad.htm

Requirements: A Graduate Certificate in Family Life Coaching requires a total of 12 credit hours. Nine

(9) credit hours are required courses, with the remaining 3 credit hours of electives. All courses are offered online only.

Required Courses (9 credit hours)

FYD 545 Family Communication and Coaching FYD 590 Family Life Coaching FYD 502 Theories in Family Science

Electives (3 credit hours)

Approved course in Family Life and Youth Development (FYD)

The Youth, Family, and Community Sciences (YFCS) academic program at North Carolina State University is proud to offer graduate distance education programs designed to prepare and strengthen current and future professionals. The Youth, Family, and Community Sciences online programs create and advance the careers of those who work with youth and/or families in community-based settings.

The Youth, Family, and Community Sciences Online Graduate Certificate in *Family Life Education and Coaching* prepares students to work with parents, professionals, and families as a both family life educator and family life coach. **Family Life Coaches** (FLC) help clients through a thought-provoking and creative process that inspires them to maximize their potential, reach goals, and achieve happiness. **Family Life Educators** (FLE) are strengths-based professionals

who provide preventative education to families in organized efforts designed to provide information, skills, experiences, or resources intended to strengthen, improve, or enrich their family experience.

Admissions: Students apply online at http://www.ncsu.edu/grad/applygrad.htm

Requirements: A Graduate Certificate in Family Life Education and Coaching requires a total of 12 credit hours. Nine (9) credit hours are required courses, with the remaining three (3) credit hours of electives. All courses are offered online only.

Required Courses (9 credit hours)

YFCS 543 Applied Concepts in Parenting and Family Life Education YFCS 545 Family Communication and Coaching YFCS 547 Family Life Coaching

Electives (3 credit hours)

Approved YFCS Elective in family life education (FLE) content area

The Department of Youth, Family, and Community Sciences offers a total of seven graduate certificates that are designed to prepare students and professionals to better serve as leaders in family life and youth development organizations.

Admissions: Students apply online at http://www.ncsu.edu/grad/applygrad.htm

Requirements: A Graduate Certificate in Family Life & Parent Education requires a total of 12 credit hours. Six (6) credit hours are required courses, with the remaining 6 credit hours of electives. All courses are offered online only.

Required Courses (6 credit hours)
FYD 543 Applied Concepts in Parenting and Family Life Education

Choose One:

FYD 523 Family Relationships of the Life Course FYD 533 Complex Family Issues

Electives (6 credit hours)

Approved courses in Family Life and Youth Development (FYD)

The Graduate Certificate Program in Feed Science is designed to prepare professionals or current degree program students to work in the feed industry. The program will provide an advanced foundation in feed science technology, animal nutrition and feed formulation, and feed industry leadership. All courses can be delivered by distance education methods.

The objectives of this program are for the student to acquire an understanding of the technical aspects of modern feed and pet food manufacturing, feed mill operations and leadership, feed and ingredient quality assurance, food chain safety, feed industry regulations, animal nutrition

and feed formulation, feed product marketing and strategic planning, and how to apply technical and academic skills to the challenges of the global feed industry.

Admission Requirements: Applicants must have a BS/BA degree or equivalent four year degree in order to apply to the program. Individuals interested in this certificate program must complete the admissions form and send it to the Director of Graduate Programs in Poultry Science.

Program Requirements: A minimum of 12 credit hours from the prescribed list of courses and a grade of 'C-' or better in these courses is required to receive credit for the certificate. To receive a Graduate Certificate in Feed Science, a student must have a minimum 3.0 grade point average on all certificate course work. All course work must be registered through NC State University, transfer credit from other universities is not allowed. All work must be completed in four (4) calendar years, beginning from the time the application is approved by the Director of Graduate Programs.

Required Courses

PO/NTR 515 Advanced Comparative Nutrition (3 cr.) FM/NTR 525 Advanced Feed Science and Technology (3 cr.) FM 580 Feed and Ingredient Quality Assurance (3 cr.)

Optional Courses

FM 460 Feed Mill Operations and Leadership (2 cr.) NTR/FM 790 Advanced Feed Formulation (3 cr.) FM 594 Advanced Feed Mill Practicum (1 cr.) FM 601 Feed Science Seminar (1 cr.)

The Graduate Certificate in E-Learning (online) represents a response to increased interest toward e-learning design and teaching competencies in K-12, post secondary, government and corporate sectors. The program is designed to prepare graduates with the knowledge and skills necessary to assume roles in integrating e-learning into the curriculum or teaching entirely online. All certificate courses are offered online and students are required to select a focus area of either K-12 or adult education.

Admissions: Applicants must meet at least one of the following criteria: (1) graduate of an accredited four year college and have a GPA of at least 3.0 on a four-point scale in their last 60 credit hours of undergraduate study; (2) degree student in good standing in an NC State graduate program; or (3) have a Master's degree.

Requirements: The Graduate Certificate in E-Learning requires a minimum of 15 hours, including 12 hours of core courses and 3 hours of electives. Students must maintain a minimum overall GPA of B (3.0).

Required Courses:

EAC 539 - Teaching in an Online Environment

EAC 584 - Evaluating Training Transfer & Effectiveness

EAC 585 - Integrating Technology into Training Design

EAC 581 - Advanced Instructional Design

Elective Courses:

EAC 580 - Designing Instructional Systems

TED 530 - Foundations of Technical and Technology Education

TED 534 - Instructional Design for Technical and Technology Education

TED 552 - Curricula for Emerging Technologies

TED 555 - Developing and Implementing Technology Education

TED 558 - Teaching Creative Problem Solving

Other Information: The program is offered jointly by the Department of Policy, Leadership, and Adult and Higher Education and the Department of Curriculum, Instruction, and Counselor Education.

For more information, see http://ced.ncsu.edu/lpahe/whre/e-learning

The Department of Youth, Family, and Community Sciences offers a total of seven graduate certificates that are designed to prepare students and professionals to better serve as leaders in family life and youth development organizations.

Admissions: Students apply online at http://www.ncsu.edu/grad/applygrad.htm

Requirements: A Graduate Certificate in Gerontology requires a total of 12 credit hours. Nine (9) credit hours are required courses, with the remaining 3 credit hours of electives. All courses are offered online only.

Required Courses (9 credit hours)

FYD 524 Gerontology in Family Life Education

FYD 523 Family Relationships Over the Life Course

Choose One:

FYD 502 Theories in Family Science

FYD 533 Complex Family Issues

Electives (3 credit hours)

Approved course in Family Life and Youth Development (FYD)

The Graduate Certificate in Geospatial Information Science (GIS) and Geographic Information Systems provides students with a graduate level academic credential in advanced GIS applications. This program is designed for students who wish to establish themselves in GIS practice but are not yet ready to commit to a full graduate program. The Certificate can be completed entirely online. The Certificate is also available to current NC State students enrolled

in a non-GIS graduate degree. The entire program requires 12 credit hours. The program is designed to add GIS competencies to an existing professional portfolio and to allow the initial exploration of graduate level geospatial studies. Students may transfer up to 12 credit hours from the Certificate into the Masters of Geospatial Information Science and Technology degree (MGIST) upon application and acceptance into that program.

Admission Requirements: The Certificate program requires a Bachelor's degree, a personal statement describing your interest in the program and highlighting professional ambitions and experience, a resume/CV, and a minimum 3.0 undergraduate GPA. Application information and curriculum requirements are listed on the GIS Certificate website.

Certificate Requirements: Award of a certificate requires a cumulative GPA of 3.0 or better for the certificate courses (12 credit hours total; 6 required, 6 elective). See the GIS Certificate website for a detailed list of courses.

Other Relevant Information: The Certificate may be taken entirely online. Undergraduates interested in taking courses towards the Certificate should contact the program or refer to the GIS Certificate website for more information.

The <u>Certificate in Horticultural Science</u> is a non-degree program offered through the Department of Horticultural Science at North Carolina State University. The Certificate program is designed to increase personal knowledge and skills for current or future employment in the Horticultural Industry. Students may concentrate in one of three areas: General Horticulture, Food Horticulture and Ornamental Horticulture.

Requirements: The Certificate program requires a minimum of five courses resulting in at least 15 credits to be completed within 4 years. The courses will constitute a cohesive continuing education in Horticultural Science and will be selected by the candidate and the advisor.

Applicant must have a B.S. or higher degree from an accredited four-year college or university and have a GPA of at least 3.0 on a 4.0-point scale.

It is highly recommended that candidates have a major in horticulture, crop science, plant science, plant biology or agricultural education with a plant science emphasis. Applicants who do not meet the GPA requirement may be admitted provisionally based on past work experience as a professional in horticulture or a related field. Supporting documentation of professional experience in horticulture or a related field must be submitted for provisional admission. Students who are admitted provisionally must earn at least a 3.0 GPA average in the first two courses of the certificate program in order to obtain full admission into the program. Certificate students must maintain an average GPA of 3.0 and a minimum grade of C (2.00) in any of the Horticulture Graduate Certificate courses.

Curriculum: The following courses can be used for credit in the Horticultural Science Certificate Program. Please note: Not all courses are offered each semester. Students should consult their advisor and the course catalog for the most up-to-date course listings.

Horticultural Science (DE and on-campus sections)

- HS 523 General Viticulture
- HS 532 Permaculture
- HS 541 Plant Breeding Methods
- HS 562 Post Harvest Physiology
- HS 550 Special Problems in Horticultural Science (Environmental Nursery Production)
- HS 590 Plant Breeding Overview
- HS 707 Environmental Stress Physiology
- HS 717 Weed Management Systems
- HS 790 Diagnostic Criteria for Plant Nutrition

Horticultural Science (On-campus sections only)

- HS 502 Plant Disease: Methods and Diagnosis
- HS 701 Carbohydrate Metabolism and Transport
- HS 704 Plant Nomenclature
- HS 705 Physiology of Flowering
- HS 706 Fruit Development and Postharvest Physiology
- HS 715 Weed Science Research Techniques
- HS 716 Weed Biology
- HS 718 Biological Control of Weeds
- HS 720 Molecular Biology in Plant Breeding
- HS 725 Pesticide Chemistry
- HS 727 Pesticide Behavior and Fate in the Environment
- HS 745 Quantitative Genetics in Plant Breeding
- HS 746 Breeding Methods
- HS 748 Breeding for Pest Resistance

Any other graduate-level Horticultural Science courses.

Plant Pathology

PP 502 Plant Disease: Methods and Diagnosis

Entomology

ENT 591 Insect Pest Management

Soil Science

- SSC 440 Geographic Information
- SSC 470/570 Wetland Soils
- SSC 532 Soil Microbiology
- SSC 551 Soil Morphology, Genesis and Classification
- SSC 562 Environmental Applications of Soil Science

Food Science

- FS 495 Special Topics in Food Science (Good Manufacturing Practices)
- FS 495 Special Topics in Food Science (Sanitation Standard Opt. Proc.)
- FS 495 Special Topics in Food Science (Sanitation)
- FS 495 Special Topics in Food Science (Hazard Analysis/ Risk Assess.)
- FS 495 Special Topics in Food Science (Microbiology / Microbial Hazards)

Agriculture & Extension Education

- AEE 501 Foundations of Agriculture & Extension Education
- AEE 521 Program Planning in Agriculture & Extension Education
- AEE 523 Adult Education in Agriculture

For more information about the Certificate Program and applications materials, please see the Department of Horticultural Science website.

The Youth, Family, and Community Sciences (YFCS) academic program at North Carolina State University offers three graduate distance education programs designed to prepare and strengthen the careers of those who work with youth and/or families in community-based settings.

The Youth, Family, and Community Sciences online Graduate Certificate in *Leadership and Volunteer Management* specifically prepares students to work as leaders in community-based organizations. Students gain a more comprehensive understanding of organizational leadership, as well as an applied understanding of effective management skills. The certificate is intended to enhance a student's work in organizational administration and/or volunteer management including volunteer recruitment, retention, risk management, and recognition.

Admissions: Students apply online at http://www.ncsu.edu/grad/applygrad.htm

Requirements: A Graduate Certificate in Leadership and Volunteer Management requires a total of 12 credit hours. Six (6) credit hours are required courses, with the remaining six (6) credit hours of electives. All courses are offered online only.

Required Courses (6 credit hours)

YFCS 550 Youth and Family Professionals as Leaders YFCS 557 Volunteerism in Youth and Family Settings

Electives (6 credit hours)

Approved YFCS course related to organizational administration Approved YFCS course related to student's career interests

The Graduate Certificate in Mathematics is a one-year program that focuses on two groups of students. It is designed for students who have some mathematical training but do not have a full bachelor's degree in mathematics. It also targets students who have a bachelor's degree in mathematics but do not feel they are ready for graduate school.

The goal of the certificate is to prepare and motive students through courses and careful mentoring. The program will deepen and broaden students' understanding of mathematics, the mathematics profession, and the mathematical community. Students will learn how the mathematics discipline can solve significant problems for government, industry, other scientists, and ultimately, society at large.

Admissions: Application to the program requires an online application form, three (3) letters of recommendation (two need to be academic), transcripts of all academic work after high school,

and a written statement. GREs are highly desirable but not required for admission. Admission will be on a competitive basis.

Requirements: Students take a combination of graduate and undergraduate mathematics courses that are tailored to the individual student. The certificate requires 12 hours of mathematics courses, taken for a grade, and to be taken at NC State. There is no specific list of courses for the certificate.

Of the 12 hours, three (3) hours may be at the 400 level with prior approval of the Director of Graduate Programs. The other nine (9) hours will be at the 500 level or above. Students must take at least two (2) courses per semester to remain in good standing. A grade of C- is required for a course to count toward the certificate. A 3.00 GPA is required to earn the certificate.

The Graduate Certificate in Medical Devices is a joint program that links NC State's College of Engineering with the University of North Carolina School of Medicine. The program prepares graduates to conceive and design prototypes for new medical devices as well as training in market assessment, financing options, etc.

Admissions: Enrolled NCSU and UNC graduate students, doctoral candidates and post-docs, as well as part-time and full-time faculty and staff, may apply online at the Certificate's website. Professionals from the local MedTech sector may also apply online through the NCSU Graduate School. A bachelor's degree is required. Preference is given to applicants with scientific and/or engineering backgrounds.

Requirements: The program requires a total of 12 credit hours from an approved course list, including two BME advanced medical devices courses, two related business courses, and participation in ten clinical seminars.

For more information, see the Certificate's website or contact the Director.

The Graduate Certificate in Marketing is a one to two year program that is designed for graduate students at NC State as well as working professionals in the Research Triangle community. They will obtain advanced skills in consumer behavior. marketing research, product management and innovation, and relationship management.

Admission requirements: Graduate students at NC State must be in good standing and must submit an application to the certificate program that will be reviewed and approved by the coordinator. Students not attending NC State must have completed a baccalaureate degree. A minimum GPA of 3.0 in undergraduate and graduate work combined is required for admission to the program. Those with less than a 3.0 may be admitted provisionally. Provisionally admitted students must initially take MBA 560 and earn a grade of B (3.0) or better.

Training in molecular biotechnology is essential for a wide range of disciplines from microbiology, plant and animal sciences to chemical engineering. The Graduate Certificate Program in Molecular Biotechnology offers an opportunity for individuals educated in the life sciences and related disciplines to gain laboratory-based, hands-on molecular biology training.

NC State graduate students with career interests that involve molecular biotechnology, but are not eligible for the minor, are eligible to apply for the certificate.

The Graduate Certificate Program in Molecular Biotechnology will require a minimum of 12 hours of required and elective courses as listed below:

REQUIRED (5 credits)

BIT 510 and BIT 510L Core Technologies in Molecular and Cellular Biotechnology (4 credits) EthicalIssues in Biotechnology (1 credit) or an approved research ethics or bioethics course BIT Capstone Cloning Project (due two weeks after completing BIT510)

BIOTECHNOLOGY LABORATORY ELECTIVES (4 credits)

For the most up to date list of courses please visit the BIT website: http://biotech.ncsu.edu/courses Two of the following courses and their laboratories (2 credits each):

Any BIT 595 laboratory course (2 credits)

BIT 562	Microarrays			
BIT 564	Protein Purification			
BIT 565	Real-time PCR Techniques			
BIT 566	Animal Cell Culture			
BIT 567	PCR and DNA Fingerprinting			
BIT 568	Genome Mapping			
BIT 571	RNA Interference and Model Organisms			
BIT 572	Proteomics			
BIT 573	Protein-Protein Interactions			
BIT 574 Plant Genetic Engineering				
BIT 576 Computation Analysis of Biomolecular Sequences				
BIT 577 Metagenomics				
BIT 578 Mapping the Brain				

OTHER ELECTIVES -- CHOOSE ONE (3 credits)

GN 513	Advanced Genetics			
MB 714	Microbial Metabolic Regulation			
MB(GN) 758	Prokaryotic Molecular Genetics			
BO 780	Plant Molecular Biology			
BCH 553	Biochemistry of Gene Expression			
FS(MB) 725	Fermentation Microbiology			
ST(GN) 721	Genetic Data Analysis			
GN 701	Molecular Genetics			
GN 735	Functional Genomics			
CHE 551	Biochemical Engineering			
Other courses (400-level or higher) may be considered by special in				

request.

The objective of the program is to educate students about nuclear nonproliferation, safeguards, and security from both the global and the technical perspectives. Students will be exposed to state-of-the-art techniques and will develop an understanding of the technical and policy challenges to maintain and support a robust nuclear nonproliferation regime. This process will be supported by assignments designed to reinforce understanding of the individual subject areas

covered, class projects which cover key areas such as proliferation case studies and physical security simulations, as well as interactions with subject matter experts in nuclear nonproliferation technology and policy.

A Graduate Certificate in Nonprofit Management is available to students, including NC State degree students, who have a Bachelor's degree from an accredited university. The Certificate requires 15 credit hours of course work and substantive nonprofit experience. The courses are designed to provide the basic management knowledge and skills needed in nonprofit organizations. For applications and a description of program requirements go to https://spia.ncsu.edu/graduate/nonprofit_cert.php.

The certificate program in Nonwovens Science and Technology provides NC State graduate students the opportunity to develop recognized academic credentials in Nonwovens Science and Technology in addition to their major area of graduate study. Provide non-degree graduate level students the opportunity to develop recognized advanced expertise in Nonwovens Science and Technology.

Required Coursework: The Graduate Certificate Program in Nonwovens Science and Technology requires a minimum of 15 hours and includes the following courses:

Core Courses (6 hours):

TT(NW) 503 Materials, Polymers and Fibers Used in Nonwovens (3 hours) *OR*TMS 762 Physical Properties of Fiber Forming Polymers, Fibers and Fibrous Structures (3 hours)
TT(NW) 504 IntroductiontoNonwovens Products and Processes (3 hours)

Advanced Courses (minimum 9 hours)*:

TT(NW) 505 Advanced Nonwovens Processing (3 hours)
TT(NW) 506 Bonding Principles in Nonwovens (3 hours)
TT(NW) 507 Nonwoven Characterization Methods (3 hours)
Nonwoven Product Development (3 hours)

*One NC State course (400-level or higher) may be substituted for one of the advanced courses into the program upon agreement between the Certificate Coordinator and the student. The Certificate Coordinator will maintain a list of graduate-level courses appropriate to use as substitutions.

The Graduate Certificate in Supply Chain Management is a one to two year program that is designed for graduate students at NC State as well as working professionals in the Research Triangle community. They will obtain advanced skills in strategies. processes, planning and control, quality, scheduling, work design, and advanced operations techniques using a variety of managerial and quantitative models.

Admission requirements: Graduate students at NC State must be in good standing and must submit an application to the certificate program what will be reviewed and approved by the coordinator. Students not attending NC State must have completed a baccalaureate degree. A minimum GPA of 3.0 in undergraduate and graduate work combined is required for admission to

the program. Those with less than a 3.0 may be admitted provisionally. Provisionally admitted students must initially take MBA 540 and earn a grade of B (3.0) or better.

This online certificate program is designed to provide graduate students and professionals with a common platform of courses that will enhance their communication skills and professional development. In particular, professional science master's program students in the program will gain the management and communication training that will allow them to transfer success in the laboratory to success in the marketplace.

Admission Requirements: Students not attending NC State must apply through the regular application process (see http://www.ncsu.edu/grad/applygrad.htm). Proof of completion of a bachelor's degree is necessary. A minimum undergraduate GPA of 3.0 is generally required for admission to the certificate program. However, performance in graduate work will also be considered. Provisional admission may be granted for applicants whose GPA is below 3.0.

Students currently in a degree program at NC State may add the certificate program to their program by completing the application for currently enrolled graduate students. For applications and description of program requirements, see the program web site at http://pcms.ncsu.edu/.

Student Financial Support: See NC State's Office of Scholarships and Financial Aid at http://www7.acs.ncsu.edu/financial_aid/.

Other Relevant Information: The interdisciplinary certificate requires a total of 12 credit hours, with 6 hours taken in the Poole College of Management and 6 hours taken in the College of Humanities and Social Sciences. Two required classes are BUS 590 (Management Foundations) and MBA 554 (Project Management). Two of the three following classes should also be taken: COM 521 (Communication and Globalization), COM 527 (Seminar in Organizational Conflict Management), or COM 530 (Interpersonal Communication in Science/Technology Organizations). To earn the certificate students must achieve a minimum 3.0 GPA in the program.

The Program Development in Family Life Education certificate is closed to new student enrollment. Please visit the Department of Youth, Family, and Community Sciences website for information on our current certificate offerings.

The Department of Youth, Family, and Community Sciences (YFCS) at North Carolina State University is proud to offer graduate distance education programs designed to prepare and strengthen current and future professionals. The Youth, Family, and Community Sciences online programs create and advance the careers of those who work with youth and/or families in community-based settings.

Admissions: Students apply online at http://www.ncsu.edu/grad/applygrad.htm

Requirements: A Graduate Certificate in Program Development in Family Life Education requires a total of 12 credit hours. Nine (9) credit hours are required courses, with the remaining 3 credit hours of electives. All courses are offered online only.

Required Courses (9 credit hours)

FYD 543 Applied Concepts in Parenting and Family Life Education FYD 552 Program Development and Evaluation in Family and Youth Settings FYD 556 Organizational Systems in Youth and Family Settings

Electives (3 credit hours)

Approved course in Family Life and Youth Development (FYD)

Public policy -- the actions of government and its partners in the non-profit and private sectors -- is the keystone of politics and public administration. The creation, adoption, and implementation of public policy is a complex process. It requires skills in analysis, reasoning, and argumentation -- what we call evidence-based policy advocacy. The Graduate Certificate in Public Policy helps you make the most of your skills by providing you with the tools you need to be an effective advocate for realistic, effective, and responsible public policy.

Admissions: Students not attending NC State are required to apply through the usual application process (see http://www.ncsu.edu/grad/applygrad.htm). A minimum undergraduate GPA of 3.0 is generally required for admission to the program; performance in graduate work will also be considered. Provisional admission may be granted for applicants whose GPA is below 3.0.

Students currently in a degree program at NC State may add the certificate program to their program by completing the application for currently enrolled graduate students. For applications and description of program requirements, go to the Public Policy Certificate Program web site.

Curriculum: The certificate requires a total of 12 credit hours consisting of Applied Political Economy (PA 509), Public Policy Analysis (PA 511), Public Policy Process (PA 507), and an elective policy or managerial course approved by the program coordinator. Electives may be from virtually any graduate program at NC State, such as agricultural sciences, business management, communication, education, engineering, humanities, natural resources, or social sciences.

Other Information: Students who do not have course work in social science statistics will be required to take a statistics course either at the School of Public and International Affairs or a department of the student's choosing, with approval of the program coordinator.

The Graduate Certificate in Renewable Electric Energy Systems provides graduate students with the opportunity to develop expertise in renewable electric energy systems and advanced electric power grid technology in addition to their major area of graduate study.

Admissions: Applicants with appropriate background must meet one of the three following requirements:

- be a graduate of an accredited four-year college or university, and have a GPA of at least 3.0 on a 4-point scale in their last 60 credit hours of undergraduate study;
- be a degree student in good standing in an NC State University graduate program; and
- have a Master's degree.

A student may obtain more than one graduate certificate in a different field. Each certificate must have at least nine (9) credit hours that are unique to it.

Requirements: The Graduate Certificate in Renewable Electric Energy Systems requires a minimum of 12 hours, including one 3-hour core course and 9 credit hours of electives to be selected from a list that contains relevant courses for the certificate. Students must maintain a minimum overall GPA of B (3.0).

For course and enrollment information please visit the <u>Department of Electrical and Computer Engineering website</u>.

Whether you are interested in managing stadiums, amphitheaters, performing arts centers or sport arenas, this immersive facilities management program is right for you.

This one-year online graduate certificate program was designed in collaboration with industry experts to either advance your career or facilitate entry into this exciting field.

The 12-credit-hour graduate certificate program can be completed entirely online. Students are admitted as a cohort and complete all required courses as a group. Using an 8-week accelerated course format, students take one course at a time and finish the program in two semesters.

The intent of the program is to provide post-baccalaureate students with knowledge related to 21st century special education service delivery in the schools. The certificate program courses include foci on the contemporary, evidenced based intervention concepts of Multi-Tiered Systems of Support (MTSS), as well as Positive Behavior Intervention and Support (PSIS) and, to a lesser degree, Response to Intervention (Rtl).

The Graduate Certificate Program in Textile Brand Management and Marketing provides graduate students with the opportunity to develop academic credentials in branding fundamentals and theories for a globalized industry and market research while complementing this knowledge with topics of strategic management, product development, supply chain management and technology management. The program also provides non-degree graduate-level students with the opportunity to develop recognized advanced expertise in Textile Brand Management and Marketing.

Admission: Applications must meet one of the following three requirements:

- Be a graduate of an accredited four-year college or university and have a grade point average of at least 3.0 on a 4-point scale in their last 60 credit hours of undergraduate study;
- Be a degree student in good standing in an NC State University graduate program; or
- Have a Master's degree.

Applicants who do not meet the GPA requirements may be admitted professionally based on past work experience as a professional in textiles or a textile related field. Supporting documentation

of professional experience in textile should be submitted for provisional admission. Students who are admitted provisionally must earn at least a "B" average in the first three courses of the certificate program in order to obtain full admission into the certificate program.

Requirements: A minimum of 15 credit hours is required to complete the certificate program and student must have a minimum 3.0 grade point average on all certificate course work. Transfer credit from other universities is not allowed. All work must be completed in four (4) calendar years, beginning from the time the student begins course work for the Certificate.

For more information, please visit the Textile Technology and Management website.

The Certificate in Training and Development is a non-degree graduate program for lifelong learning students offered through the Department of Leadership, Policy, and Adult and Higher Education at North Carolina State University. Lifelong learning students are those students who are classified by the University as NDS (Non-Degree Studies) for purposes of registration.

The Graduate Certificate program consists of a selected set of for-credit courses that are offered in an online format. The courses are selected to offer a cohesive continuing education opportunity for people in training roles in business, government, military, and not-for-profit sectors. This program is designed for the person who has recently advanced into a training position and is without the academic preparation needed or for those choosing to increase their knowledge and skills in training for current or future jobs. The program is not intended for career exploration nor is it a prerequisite for a graduate degree program. The program is made up of a minimum of five 3-credit courses. The student will complete the identified Certificate courses through continuous enrollment (excluding summer sessions) until contract requirements are met. Participants must hold a baccalaureate degree to enroll in the Certificate Program. All courses have the potential for transfer into the online M.Ed. in Training and Development.

Curriculum: The program requires completion on the following four required courses and one elective course.

Required Courses:

EAC 580 Designing Instructional Systems in Training and Development

EAC 583 Needs Assessment and Task Analysis in Training and Development

EAC 584 Evaluating Training Transfer and Effectiveness

EAC 586 Methods and Techniques of Training and Development

Elective Courses:

EAC 555 - Ethics in the Workplace & Education

EAC 556 - The Change Process: Theory and Practice

EAC 581 - Advanced Instructional Design

EAC 582 - Organization & Operation of Training & Development Programs

EAC 585 - Integrating Technology into Training Design

EAC 586 – Methods and Techniques of Training & Development

For course descriptions, please refer to the NCSU listing of courses.

For further information, see the <u>Certificate in Training and Development</u> website or the <u>Leadership</u>, <u>Policy</u>, <u>and Adult and Higher Education</u> website.

The certificate in Technology Entrepreneurship and Commercialization (TEC) is a hands-on, project-based practicum in creating and growing technology-intensive businesses. Graduate students develop knowledge, skills and tools useful for engaging in technology entrepreneurship. We focus on capabilities that are equally relevant to the creation and growth of new ventures or to the creation of innovation within established firms. Students learn and apply a proven structured process (developed at NC State but adopted by many universities and taught on four continents) to evaluate technologies, create and develop product ideas, and construct business proposals to bring technology-based products to market. Students with primarily technical backgrounds and those with primarily business backgrounds gain essential skills in working together productively.

Admissions Requirements: Graduate students at NC State must be in good standing. Students not enrolled at NC State must have completed a baccalaureate degree. All students must submit an application to the certificate program which will be reviewed and evaluated by the coordinator. A minimum GPA of 3.0 (in undergraduate and/or prior graduate work) is required for admission to the program. Those with less than a 3.0 may be admitted provisionally. Provisionally admitted students must initially take MBA 570 and earn a grade of B (3.0).

Program Requirements: The certificate program requires students to complete twelve (12) credit hours with an overall 3.0 GPA in all certificate courses. Credit toward the certificate in a particular course will be given only if a grade of B- or better is earned in that course. Currently, the three required courses are MBA 570 and MBA/MSE 576 and 577, each of which carries four credit hours. The recommended sequence is 570, 576, 577. All courses in the program must be taken for a letter grade. No transfer credits will be accepted in the program and it must be completed within three years.

The Graduate Certificate Program in Textile Supply Chain Management provides NC State graduate students the opportunity to develop recognized academic credentials in this concentration in addition to their major area of graduate study. The Certificate also provides non-degree graduate-level students the opportunity to develop recognized advanced expertise in Textile Supply Chain Management.

Admission: Applicants must meet one of the 3 following requirements:

- Be a graduate of an accredited four-year college or university, and have a GPA of at least 3.0 on a 4-point scale in their last 60 credit hours of undergraduate study;
- Be a degree student in good standing in a NC State University graduate program; and
- Have a Master's degree.

Provisional Admission: Applicants who do not meet the GPA requirements may be admitted provisionally based on past work experiences as a professional in textiles or a textile related

field. Supporting documentation of professional experience in textiles should be submitted for provisional admission. Students who are admitted provisionally must earn at least a "B" average in the first three courses of the certificate program in order obtain full admission into the certificate program.

Program Requirements: The Graduate Certificate in Textile Supply Chain Management requires a minimum of 15 hours, and includes the following courses:

Core Courses (9 credit hours)

TTM 501 Textile Enterprise Integration (3)
TTM 761 Supply Chain Management and Information Technology (3)
TE 533 Lean Six Sigma (3) OR
TE 540 Computer Information Systems

Advanced Courses (6 credit hours)

TTM 530 Textile Quality and Process Control (3)
TTM 531 Total Quality Management (3)
TTM 583 Strategic Planning for Textile Firms (3)
TTM 588A Global Perspectives in Textile Supply Chain Management: USA (3)

TE 533 Lean Six Sigma (3) OR TE 540 Computer Information Systems

One NC State course (400 level or higher) may be substituted for one of the advanced courses into the program upon agreement between the Certificate Coordinator and the student. The Certificate Coordinator maintains a list of appropriate graduate level courses.

Academic Performance:

- Award of a Graduate Certificate in Textile Supply Chain Management (GCTSCM) requires a minimum overall GPA of 3.0.
- None of the required 15 hours may be taken for S/U or "credit only".
- No transfer credits from other institutions are allowed for the certificate.
- All students must be registered through NC State University.
- All GCTSCM requirements must be completed within the first four (4) calendar years beginning with the date the students begins the course work for the certificate.
- All Certificate students are expected to maintain continuous enrollment every semester
 (excluding summer sessions) until all course work is completed. Under unusual circumstances, a
 one-semester leave of absence will be granted if the student is unable to enroll in a course.
 Written approval from the certificate coordinator must be obtained before the beginning of the
 semester.

Delivered 100% online, the Certificate consists of five 3-credit courses focused on teaching, training, and the use of technology in a variety of educational environments. Students can tailor the program to meet their needs and gain the knowledge and skills necessary to design and deliver course-related content through face-to-face, technology-enhanced, and e-learning environments. The program is designed for mid-career individuals who may be without academic preparation for their current positions, or for those choosing to increase their knowledge and skills in the field for future job opportunities.

Students may choose one of the following specialty areas: Training and Development, Instructional Design, E-Learning, Community College Teaching, and Community College Leadership.

In order to be awarded the Certificate, all required courses must be taken and one elective is allowed. Transfer credit from other institutions is not allowed.

Please see the department website for the specific required and elective courses for each specialization. For course descriptions, please refer to the NC State <u>listing of courses</u>. For further information, see the Certificate in Teaching, Training and Educational Technology (https://ced.ncsu.edu/programs/teaching-training-educational-technology-certificate/) website.

Graduate students and working professionals can now earn a new credential to kick-start or advance their career in the biopharmaceutical industry. Applications are currently being accepted for two new BTEC graduate certificate programs. The Upstream Biomanufacturing graduate certificate offers NC State graduate students and working professionals the opportunity for hands-on learning in BTEC's industry-scale simulated cGMP facilities.

Each certificate requires 12 hours of graduate coursework, which can be transferred to the Master of Biomanufacturing program. The majority of BTEC's graduate courses are offered in the evening or online to better accommodate working professionals.

Admission Requirements: Applicants must apply to the Graduate

School http://www.ncsu.edu/grad/applygrad.htm. Those applicants who are currently enrolled in an NC State graduate program need only provide the Graduate Student Certificate Plan Data Entry forms, http://ncsu.edu/grad/faculty-and-staff/docs/grad-cert-plan-data-entry.pdf. An application for acceptance into a certificate programs is required for all new applicants once the student has:

- either have graduated with a baccalaureate degree in a science or engineering discipline with a minimum GPA of 3.0 or
- 2. have complete one or more 500+ level BEC courses which satisfy the certificate requirement with a grade of B- or better on the first enrollment in every course completed.

Certificate Degree Requirements: To earn the Graduate Certificate in Upstream Biomanufacturing, students must complete the following list of unique core courses and complete one or more elective course for a minimum total of 12 credit hours. The grade in each course for the Certificate must either be B- or higher and the over-all GPA for the Certificate courses must be 3.00 minimum. Graduate certificates are limited to 1 400 level course.

Transfer credit from other institutions will not be allowed for the Certificate. All course work must be registered through NC State University.

Required Unique Courses (9 credits total)

CHE 563 Fermentation of recombinant microorganisms (2 credits) BBS 526 Upstream biomanufacturing laboratory (2 credits)

BEC 580 cGMP Fermentation operations (2 credits)

BEC 577 Advanced Biomanufacturing and Biocatalysis (3 credits)

Additional Courses (Minimum of 3 credits total)

BEC 575 Global regulatory affairs (3 credits)

MBA 554 Project Management (3 credits) or ISE 589 Project Management for Engineers (3 credits)

BIT 566 Animal Cell Culture Techniques (2 credits)

BEC 488 Cell Culture Engineering (2 credits)

BEC 440 Expression Systems in Biomanufacturing (3 credits) or BIT 510 Core Technologies in Molecular and Cellular Biology (4 credits)

The certificate in Upstream Biomanufacturing requirements must be completed within four (4) calendar years, beginning with the date the student commences courses applicable to the Certificate. Students who complete the certificate in Upstream Biomanufacturing may obtain more than one certificate. However, each certificate must have at least nine (9) hours of BEC course work which are unique to it.

Other Relevant Information: A unique, cross-disciplinary instructional center, the Golden LEAF Biomanufacturing Training and Education Center (BTEC) provides educational and training opportunities to develop skilled professionals for the biomanufacturing industry and create the best-trained, most industry-focused workforce possible.

The Department of Youth, Family, and Community Sciences offers a total of seven graduate certificates that are designed to prepare students and professionals to better serve as leaders in family life and youth development organizations.

Admissions: Students apply online at http://www.ncsu.edu/grad/applygrad.htm

Requirements: A Graduate Certificate in Volunteer Management and Administration requires a total of 12 credit hours. Nine (9) credit hours are required courses, with the remaining 3 credit hours of electives. All courses are offered online only.

Required Courses (9 credit hours)

FYD 556 Organizational Systems in Youth and Family Settings

FYD 557 Volunteerism in Youth and Family Settings

FYD 558 Contemporary Issues in Volunteer Resource Management

Electives (3 credit hours)

Approved course in Family Life and Youth Development (FYD)

The Youth, Family, and Community Sciences (YFCS) academic program at North Carolina State University offers three graduate distance education programs designed to prepare and strengthen the careers of those who work with youth and/or families in community-based settings.

The Youth, Family, and Community Sciences Online Graduate Certificate in **Youth Development and Leadership** specifically prepares students to work as leaders in youth-serving organizations. Students will gain a more comprehensive understanding of youth development, as well as an applied understanding of strengths-based leadership skills, designed to provide oversight, preventative education, enrichment opportunities, and/or resources intended to strengthen, improve, or enhance youth development and organizational administration.

Admissions: Students apply online at https://grad.ncsu.edu/apply/

Requirements: A Graduate Certificate in Youth Development Leadership requires a total of 12 credit hours. Six (6) credit hours are required courses, with the remaining six (6) credit hours of electives. All courses are offered online only.

Required Courses (6 credit hours)

YFCS 550 Youth and Family Professionals as Leaders YFCS 553 Applied Concepts in Child and Youth Development

Electives (6 credit hours)

Approved YFCS course related to organizational administration Approved YFCS course related to youth or family development

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Name	Academic Rank Descr	Work Location	GFAC Status	Tenure Home
Abdel Khalik,Hany Samy	Adjunct Assoc Professor	Nuclear Grad & Temp	Grad Faculty	Nuclear Engr
Abolhasani, Milad	Asst Professor	Chemical & Biomolecular Engr	Grad Faculty	Chemical & Biomolecular Engr.
Abrams Jr,Charlie F.	Emeritus Professor	Biological And Agricultural En	Grad Faculty	Biomedical Program-Engineering
Abrams,Robin Fran	Professor	Architecture	Grad Faculty	Architecture
Abt,Karen L	Adjunct Professor	For & Envir Res Acad Research	Affiliate Grad Faculty	For & Envir Res Acad Research
Abt,Robert Carroll	Named Professor	For & Envir Res Acad Research	Grad Faculty	For & Envir Res Acad Research
Acosta, Juan Jose	Research Asst Professor	CAMCORE-Cooperative	Grad Faculty	For & Envir Res Acad Research
Adams Warren, Carrol Lynn	Teaching Asst Professor	ELPHD	Affiliate Grad Faculty	ELPHD
Adams, Jacob James	Asst Professor	Electrical & Computer Engr.	Grad Faculty	Electrical & Computer Engr.
Aday,David Derek	Professor	Applied Ecology	Grad Faculty	Applied Ecology
Addor,Mary Lou	Adjunct Asst Professor	Forestry Extension	Affiliate Grad Faculty	ELPHD
Ade,Harald	Professor	Physics	Grad Faculty	Physics
Adin,Christopher Andrew	Assoc Professor	Dept of Clinical Sciences	Grad Faculty	Dept of Clinical Sciences
Adin,Darcy Brittain	Clinical Asst Professor	Dept of Clinical Sciences	Affiliate Grad Faculty	Dept of Clinical Sciences
Adler,Kenneth B.	Professor	Dept Molecular Biomedical Scie	Grad Faculty	Dept Molecular Biomedical Sci
Adler, William	Distinguished University Prof	Philosophy & Religious Studies	Grad Faculty	Philosophy & Religious Studies
Agvaanluvsan, Undraa	Adjunct Professor	Physics	Affiliate Grad Faculty	Physics
Ahiska,Semra Sebnem	Adjunct Asst Professor	Fitts Dept Indust & Syst Engr	Affiliate Grad Faculty	Fitts Dept Indust & Syst Engr
Aiyyer,Anantha	Assoc Professor	Marine, Earth And Atmospheric	Grad Faculty	Marine Earth & Atmospheric Sci
Akpa PhD,Belinda Sena	Asst Professor	Dept Molecular Biomedical Scie	Grad Faculty	Dept Molecular Biomedical Sci
Akroyd,Duane	Professor	ELPHD	Grad Faculty	ELPHD
Alapaty,Kirankumar V		Marine, Earth And Atmospheric	Affiliate Grad Faculty	
Albert,Alex	Asst Professor	Civil Const & Environ Engineer	Grad Faculty	Civil, Const & Env Engineering
Alder,Ruth A.	Emeritus Associate Professor	Foreign Languages And Literatu	Grad Faculty	Foreign Languages and Lit
Aldige, Virginia M	Emeritus Named Professor	Sociology & Anthropology	Grad Faculty	Sociology & Anthropology
Alexander,Samuel T.	Assoc Professor	Electrical & Computer Engr.	Grad Faculty	Electrical & Computer Engr.
Alexander, Winser E.	Emeritus Professor	Electrical & Computer Engr.	Grad Faculty	Electrical & Computer Engr.
Alexanderian,Alen	Asst Professor	Mathematics	Grad Faculty	Mathematics
Alhanti,Brooke Ashley	Teaching Asst Professor	Statistics	Grad Faculty	Statistics
Allaire, Jason Christopher	Assoc Professor	Psychology	Grad Faculty	Psychology
Allbritton,Nancy Lynn	Professor	Biomedical Program - ENG	Grad Faculty	Biomedical Program-Engineering
Allen Jr,Howard Lee	Emeritus Professor	The Forest Nutrition Cooperati	Grad Faculty	For & Envir Res Acad Research
Allen,George C	Emeritus Research Assoc Prof	Horticultural Science	Grad Faculty	Horticultural Science
Allen, Jonathan C.	Professor	Food,Bioprocess & Nutrition Sc	Grad Faculty	Food,Bioprocess & Nutrition Sc
Allen,Kimberly I.	Assoc Professor	Agricultural & Human Sciences	Grad Faculty	4-H Youth Dev & Fam & Cons Sci
Allen,Nina S	Emeritus Professor	Plant and Microbial Biology	Grad Faculty	Plant and Microbial Biology
Allen,Steven G.	Professor	MBA Program-Poole COM	Grad Faculty	Business Management-Poole COM
Allen,Tania Leigh	Asst Professor	Art and Design	Grad Faculty	Art and Design
Alley,Mark L	Adjunct Assoc Professor	Dept-Population,Health,Pathobi	Affiliate Grad Faculty	Population Health&Pathobiology
Almond,Glen William	Professor	Dept-Population,Health,Pathobi	Grad Faculty	Population Health&Pathobiology
Alonso, Jose Miguel	Named Professor	Plant and Microbial Biology	Grad Faculty	Plant and Microbial Biology
Alonso,Silvia T.	Emeritus Associate Professor	Foreign Languages And Literatu	Grad Faculty	Foreign Languages and Lit
Alston-Mills,Brenda P	Emeritus Professor	Animal Science	Grad Faculty	Animal Science
Alvarez Munoz, Jose Santos	Adjunct Asst Professor	For & Envir Res Acad Research	Affiliate Grad Faculty	For & Envir Res Acad Research
Amatya,Devendra M	Adjunct Assoc Professor	Biological And Agricultural En	Affiliate Grad Faculty	Biological And Agri Engr
Ambaras,David R	Assoc Professor	History	Grad Faculty	History
Amein,Michael	Emeritus Professor	Civil Const & Environ Engineer	Grad Faculty	Civil, Const & Env Engineering
Amerson,Henry Van	Emeritus Associate Professor	Forest Biotech Program	Grad Faculty	For & Envir Res Acad Research
Ames,Natalie R.	Assoc Professor	Social Work	Grad Faculty	Social Work
Amezquita,Alejandro	Adjunct Asst Professor	Food, Bioprocess & Nutrition Sc	Affiliate Grad Faculty	Food, Bioprocess & Nutrition Sc
Amoozegar,Aziz	Professor	Crop & Soil Sciences	Grad Faculty	Soil Science
Anantharamaiah,Nagendra	Research Asst Professor	Textile Engineering, Chemistry	Affiliate Grad Faculty	Textile Engr Chemistry & Sci
Anderson,Kenneth E	Professor	Prestage Poultry Science	Grad Faculty	Prestage Poultry Science
Anderson,Kevin L.	Professor	Dept-Population, Health, Pathobi	Grad Faculty	Population Health&Pathobiology
Anderson,Norman Dean	Emeritus Professor	Sci, Tech, Engr & Math (STEM)	Grad Faculty	Sci, Tech, Engr & Math (STEM)
Andrews, Janice M	Adjunct Assoc Professor	Dept-Population, Health, Pathobi	Affiliate Grad Faculty	Population Health&Pathobiology
Aneja, Viney Pal	Professor	Marine, Earth And Atmospheric	Grad Faculty	Marine Earth & Atmospheric Sci
Ange-Van Heugten, Kimberly Dawn	Teaching Asst Professor	Animal Science	Grad Faculty	Animal Science
Anholt,Robert R	Adjunct Professor	Biological Sciences	Grad Faculty	Biological Sciences
Anistratov,Dmitriy Y	Assoc Professor	Nuclear Engineering	Grad Faculty	Nuclear Engr
Annett-Hitchcock,Katherine Emma	Assoc Professor	Textile & Apparel, Technology	Grad Faculty	Textile & Apparel Tech & Mgmt
Anson,Christopher M	Distinguished University Prof	English	Grad Faculty	English
Apperson, Charles Smith	Faranitus Named Dueferson	Entomology & Plant Pathology	Grad Faculty	Fatanalan.
Apperson, Charles Smith	Emeritus Named Professor	Entomology & Plant Pathology	Grad Faculty	Entomology
Appling,Tracy Ann	Teaching Asst Professor	Public & International Affairs	Affiliate Grad Faculty	Public & International Affairs
Arabar Trayar Kaith	Professor	Dept Molecular Biomedical Scie	Grad Faculty	Dept Molecular Biomedical Sci
Archer, Trevor Keith	Adjunct Professor	Dept-Population, Health, Pathobi	Affiliate Grad Faculty	Population Health&Pathobiology
Ardon Sayao, Marcelo Luise	Asst Professor	For & Envir Res Acad Research	Grad Faculty	For & Envir Res Acad Research
Arellano,Consuelo	Research Assoc Professor	Statistics Enterpology & Plant Pathology	Grad Faculty Affiliate Grad Faculty	Statistics Enterpology
Arends, James J.	Adjunct Professor	Entomology & Plant Pathology	Affiliate Grad Faculty	Entomology
Arendt, Carli Anne	Asst Professor	Marine, Earth And Atmospheric	Affiliate Grad Faculty	Marine Earth & Atmospheric Sci
Argyropoulos, Dimitris S	Professor	Forest Biomaterials	Grad Faculty	Forest Biomaterials
Armstrong, Helen Saunders	Assoc Professor	Graphic & Industrial Design	Grad Faculty	Graphic & Industrial Design
Arnold Alicon E	Lecturer Teaching Asst Professor	Music	Affiliate Grad Faculty	Music
Arnold John F	Teaching Asst Professor	Interdisciplinary Studies	Affiliate Grad Faculty	Interdisciplinary Studies
Arnold, John F.	Emeritus Associate Professor	TELS	Grad Faculty	TELS
Arrington, Shirley Hart		ELPHD	Affiliate Grad Faculty	
Arritt III,Fletcher M	Drofossor	Food, Bioprocess & Nutrition Sc	Affiliate Grad Faculty	Civil Const 9 Env Fasianasias
Arumugam,Sankarasubramanian	Professor	Civil Const & Environ Engineer	Grad Faculty	Civil, Const & Env Engineering
Arya,Satya Pal Singh	Emeritus Professor	Marine, Earth And Atmospheric	Grad Faculty	Marine Earth & Atmospheric Sci

Ascencio-Ihanez Jose Trinidad Ash Sarah I Ashlev.Patricia Andrews Ashrafi,Hamid Ashwell, Christopher M. Aspnes, David E Atchley William Reid Atkins, Clarke E. Atkinson, Maxine P. Attarian PhD, Aram Auerbach, David D. Augspurger, Thomas Paul Augustyn, Veronica Aurand, Leonard W. Austin, David Franklin Averre III.Charles W Avery Jr.Gene Brooks Avramova, Maria Nikolova Avlor.David Lawrence Ayoub,Ali Ayoub, Mahmoud A. Aysu, Aydin Aziz.Tarek Azmy, Yousry Y BERRIDGE.Brian R Bacheler, Jack S. Bachmann, Klaus J. Baeumer, Wolfgang Bahler, Dennis R Bailey.Christopher Scott Bailey,John A. Bailey,Kermit L Baines,Barbara Joan Bakalov.Boiko Nentchev Baker III.George A Baker Anne Baker, James R. Baker, James R. Baker, Meecee M. Baker Rodney B Baker.Stanlev B Baker-Ward,Lynne Elizabeth Balaban, John Balaban,Robert S Balan.Tonva E Baldwin Tameshia Ballard Baliga, B. Jayant Balik, Charles M. Balik, Suzanne M Balint-Kurti,Peter J. Ball Jr. Hershell R. Ball.David S. Ballinger, Walter Elmer Ballington Jr, James Ralph Banker, James R. Banks, Alton Joseph Banks, Harvey Thomas Banks-Lee, Pamela Baran, Mesut E Baran.Perver Korca Barbieri, Carla E Barcinas, Susan J Bardaka.Eleni Bardon,Robert E Barker,Roger L. Barlaz, Morton A Barletta.Kristin Anne Barletta.Philip Thomas Barnes.Harold J. Barnes, Harold J. Barnes.Tiffany M Barnhardt, Robert A Barnhardt.William Wilton Baron, Dror Zeev Barr.Steve H Barrangou, Rodolphe Barrax, Gerald W. Barrie, Thomas M Bartlett II James F Bartlett.Michelle E

Bartley,Jon W.

Teaching Asst Professor Professor Asst Professor Professor Distinguished University Prof Emeritus Named Disting'd Prof **Emeritus Distinguished Prof** Professor Assoc Professor Emeritus Asst Professor Adjunct Assoc Professor Asst Professor Emeritus Professor Assoc Professor Emeritus Professo Adjunct Assoc Professor Assoc Professor Asst Professor Adjunct Asst Professor Emeritus Professor Adjunct Asst Professor Asst Professor Distinguished Professor Adjunct Assoc Professor **Emeritus Professor Emeritus Professor** Assoc Professor Assoc Professor **Emeritus Professor** Assoc Professor **Emeritus Professor** Assoc Professor Emeritus Named Distng'd Prof Assoc Professor Emeritus Professor Adjunct Professor Clinical Assoc Professor Professor Professor **Emeritus Professor** Adjunct Professor Lecturer Teaching Asst Professor Distinguished University Prof Professor Teaching Asst Professor USDA Professor Emeritus Professor **Emeritus Associate Professor Emeritus Professor Emeritus Professor** Emeritus Professor Named Distinguished Univ Prof Assoc Professor Professor

Teaching Assoc Professor Assoc Professor Assoc Professor Asst Professor Professor Named Professor Distinguished University Prof Assoc Professor

Emeritus Professor Professor **Emeritus Professor** Professor Assoc Professor Professor Assoc Professor **Emeritus Professor** Professor Assoc Professor Teaching Asst Professor Professor

English

English

FIPHD

ELPHD

Architecture

Electrical & Computer Engr.

Accounting-Poole COM

Mgmt, Innovation&Entrepreneur

Grad Faculty

Grad Faculty

Grad Faculty

Food, Bioprocess & Nutrition Sc

Riochemistry Grad Faculty Food, Bioprocess & Nutrition Sc Grad Faculty FIPHD Horticultural Science Prestage Poultry Science Physics Biological Sciences Dept of Clinical Sciences Sociology & Anthropology Parks, Recreation & Tourism Mg Philosophy & Religious Studies **Biological Sciences** Materials Science & Engineering Food, Bioprocess & Nutrition Sc Philosophy & Religious Studies Entomology & Plant Pathology Marine, Earth And Atmospheric Nuclear Engineering Biological Sciences Forest Biomaterials Fitts Dept Indust & Syst Engr Electrical & Computer Engr. Civil Const & Environ Engineer **Nuclear Engineering** Dept-Population, Health, Pathobi Entomology & Plant Pathology Materials Science & Engineering Dept Molecular Biomedical Scie Computer Science-engr Dept of Clinical Sciences Mechanical & Aerospace Engr Graphic & Industrial Design English Mathematics FIPHD English Entomology & Plant Pathology Entomology & Plant Pathology Agricultural & Human Sciences Dept-Population, Health, Pathobi FIPHD Psychology English Dept-Population, Health, Pathobi Business Management-Poole COM Engineering-Academic Affairs Electrical & Computer Engr. Materials Science & Engineering Computer Science-engr Entomology & Plant Pathology Food.Bioprocess & Nutrition Sc Economics-Poole COM Horticultural Science Horticultural Science History Chemistry Mathematics Textile Engineering, Chemistry Electrical & Computer Engr. Ctr. for Geospatial Analytics Parks, Recreation & Tourism Mg ELPHD Civil Const & Environ Engineer Forestry Extension Textile Engineering, Chemistry Civil Const & Environ Engineer Textile & Apparel, Technology Electrical & Computer Engr. Dept-Population, Health, Pathobi Dept-Population, Health, Pathobi Computer Science-engr Textile & Apparel, Technology

Grad Faculty Grad Faculty Grad Faculty Grad Faculty Grad Faculty **Grad Faculty Grad Faculty** Grad Faculty Affiliate Grad Faculty Grad Faculty **Grad Faculty Grad Faculty Grad Faculty** Affiliate Grad Faculty Grad Faculty Grad Faculty Affiliate Grad Faculty Grad Faculty Affiliate Grad Faculty Grad Faculty Grad Faculty Affiliate Grad Faculty **Grad Faculty Grad Faculty** Affiliate Grad Faculty Grad Faculty Grad Faculty **Grad Faculty Grad Faculty Grad Faculty** Grad Faculty Grad Faculty **Grad Faculty Grad Faculty Grad Faculty** Affiliate Grad Faculty Affiliate Grad Faculty **Grad Faculty Grad Faculty Grad Faculty** Affiliate Grad Faculty Affiliate Grad Faculty Affiliate Grad Faculty **Grad Faculty Grad Faculty** Affiliate Grad Faculty Grad Faculty **Grad Faculty** Grad Faculty **Grad Faculty Grad Faculty Grad Faculty** Affiliate Grad Faculty Grad Faculty **Grad Faculty Grad Faculty Grad Faculty Grad Faculty** Grad Faculty Grad Faculty **Grad Faculty Grad Faculty Grad Faculty** Grad Faculty Affiliate Grad Faculty **Grad Faculty Grad Faculty** Grad Faculty **Grad Faculty** Grad Faculty **Grad Faculty Grad Faculty Grad Faculty Grad Faculty Grad Faculty**

Food, Bioprocess & Nutrition Sc Affiliate Grad Faculty Horticultural Science Prestage Poultry Science Physics Genetics Dept of Clinical Sciences Sociology & Anthropology Health and Exercise Studies Philosophy & Religious Studies **Biological Sciences** Materials Science & Engineering Food, Bioprocess & Nutrition Sc Philosophy & Religious Studies Entomology & Plant Pathology Marine Earth & Atmospheric Sci Nuclear Engr Biological Sciences Forest Biomaterials Fitts Dept Indust & Syst Engr Electrical & Computer Engr. Civil, Const & Env Engineering Nuclear Engr Population Health&Pathobiology Entomology Materials Science & Engineering Computer Science-Engr Dept of Clinical Sciences Mechanical & Aerospace Engr Graphic & Industrial Design English Mathematics FIPHD English Entomology Agricultural & Extension Edu Population Health&Pathobiology FIPHD Psychology English Population Health&Pathobiology Business Management-Poole COM Sci. Tech. Engr & Math (STEM) Electrical & Computer Engr. Materials Science & Engineering Computer Science-Engr Entomology & Plant Pathology Food, Bioprocess & Nutrition Sc Economics-Poole COM Horticultural Science History Physics Mathematics Textile Engr Chemistry & Sci Electrical & Computer Engr. Parks Recreation & Tourism Mg Parks Recreation & Tourism Mg **ELPHD** Civil, Const & Env Engineering For & Envir Res Acad Research Textile Engr Chemistry & Sci Civil, Const & Env Engineering Textile & Apparel Tech & Mgmt Population Health&Pathobiology Computer Science-Engr Textile & Apparel Tech & Mgmt English Electrical & Computer Engr. Mgmt, Innovation & Entrepreneu Food, Bioprocess & Nutrition Sc English

Architecture

Accounting-Poole COM

FIPHD

ELPHD

Riochemistry

Barvcki Joseph I Bass Lisa R Bassett Ross Knox Basu,Sukanta Batchelor,Peter Bateman, Durward F. Bates PhD John Joseph Batra Subhash K. Battestilli.Tzvetelina Baugh Jr, John W Baughman, Gerald R. Baumer, David L. Baxter.Martin A Baynes, Ronald E Beal, Candy M Bean.Eban Zachary Beare, Zachary Charles Bearon.Lucille B Beasley, Mark S Becchi, Michela Beck PhD.Keith Russell Beckman, Gary Dean Beckmann.Robert L. Beckstead, Robert Byron Bedair, Salah M. A. Begeny, John Charles Beghin, John Christopher Behnke Andrew O Beichner Robert J Beisel,Chase Belcher,Scott M Bell Jr.Brvan Bell,Geoffrey Weszely Belmont, Patrick William Benge, Drinda Elaine Bennett.Barbara A Benson, David M. Benson, Geoffrey A. Bereman, Michael S. Bereman Robert D Berenhaut.Kenneth Stephen Berglund, Emily Zechman Bergmann PhD, Ben Andrew Bernhard, Richard Harold Bernholc, Jerzy Berreth Todd Michael Berry-James, Rajade M Bertone, Matthew Alan Berube, David Michael Betts.John T. Beute.Marvin K. Bhattacharya, Subhashish Bhattacharya, Sudin Bhattacharyya,Bibhut Bhawe, Nachiket Meghashyam Bigelow.Anna Barry Bilderback.Theodore E. Bilenkin, Vladimir Binder, Andrew Ray Bingham, William L. Bird, Carolyn L. Bird.David M Birgand, François Philippe Birkenheuer, Adam Joseph Birkland.Thomas A Bishir, John William Bishop, Paul Edward Bishop, Stuart Paul Bitting, Paul F. Bitzer, Donald L. Bivins, Jason Caulfield Bizikova, Petra Bizios.Georgia Black PhD, Tyler Ray Black,Betty L. Black,Robert X Blackley,Brian Blaimer, Bonnie Bernadette Blair.Neal Edward

Blanchard, Margaret R.

Bland, George F.

Professor Asst Professor Professor Adjunct Assoc Professor Emeritus Professor **Emeritus Professor** Adjunct Professor Emeritus Named Professor Teaching Asst Professor Professor Emeritus Associate Professor Emeritus Professor Adjunct Assoc Professor Professor Assoc Professor Adjunct Asst Professor Asst Professor Assoc Professor Named Professor Assoc Professor Professor Teaching Professor Assoc Professor

Named Professor Assoc Professor Professor Assoc Professor Professor Assoc Professor Research Professor Assoc Professor Adjunct Asst Professor Adjunct Asst Professor Teaching Asst Professor Assoc Professor **Emeritus Professor** Emeritus Professor Asst Professor Emeritus Professor Adjunct Asst Professor Assoc Professor

Emeritus Professor Named Professor Asst Professor Assoc Professor

Professor Adjunct Professor Emeritus Professor Professor Adjunct Asst Professor Professor Asst Professor Assoc Professor Emeritus Professor Assoc Professor Assoc Professor Emeritus Associate Professor Assoc Professor Named Professor Assoc Professor Professor Professo **Emeritus Professor** Emeritus USDA Prof Asst Professor Emeritus Associate Professor Distinguished University Prof Professor Asst Professor Emeritus Professor Adjunct Asst Professor Professor

Adjunct Assoc Professor

Teaching Assoc Professor

Emeritus Associate Professor

Asst Professor

Adjunct Professor

Assoc Professor

Biological Sciences

English

Marine, Earth And Atmospheric

Entomology & Plant Pathology

Marine, Earth And Atmospheric

Sci, Tech, Engr & Math (STEM)

Electrical & Computer Engr.

Riochemistry - MFTRIC Grad Faculty FIPHD Grad Faculty History Grad Faculty Marine, Earth And Atmospheric **Grad Faculty** Architecture **Grad Faculty** Dean's Office - CALS Grad Faculty Marine Farth And Atmospheric Affiliate Grad Faculty Textile & Apparel, Technology **Grad Faculty** Computer Science-engr Affiliate Grad Faculty Civil Const & Environ Engineer **Grad Faculty** Biological And Agricultural En Grad Faculty Business Management-Poole COM **Grad Faculty** Marine, Earth And Atmospheric Affiliate Grad Faculty Dept-Population, Health, Pathobi Grad Faculty TELS **Grad Faculty** Biological And Agricultural En Affiliate Grad Faculty English Grad Faculty Grad Faculty Agricultural & Human Sciences Accounting-Poole COM Grad Faculty Electrical & Computer Engr. **Grad Faculty** Grad Faculty Textile Engineering, Chemistry Music Affiliate Grad Faculty Plant and Microbial Biology Grad Faculty Prestage Poultry Science Grad Faculty Electrical & Computer Engr. **Grad Faculty** Psychology **Grad Faculty** Ag & Resource Economics Grad Faculty Agricultural & Human Sciences Grad Faculty STEM:Science.Tech.Engin.&Math Grad Faculty Chemical & Biomolecular Engr **Grad Faculty Biological Sciences** Affiliate Grad Faculty Architecture **Grad Faculty** Marine, Earth And Atmospheric Affiliate Grad Faculty Marine, Earth And Atmospheric Affiliate Grad Faculty TELS **Grad Faculty** English Grad Faculty Entomology & Plant Pathology **Grad Faculty** Ag & Resource Economics **Grad Faculty Biological Sciences Grad Faculty** Grad Faculty Chemistry Mathematics Affiliate Grad Faculty Civil Const & Environ Engineer **Grad Faculty** Horticultural Science Affiliate Grad Faculty Fitts Dept Indust & Syst Engr **Grad Faculty Grad Faculty** Physics Art and Design Grad Faculty Public & International Affairs **Grad Faculty** Entomology & Plant Pathology Affiliate Grad Faculty Communication **Grad Faculty** Mathematics Affiliate Grad Faculty Entomology & Plant Pathology **Grad Faculty** Electrical & Computer Engr. **Grad Faculty** Mathematics Affiliate Grad Faculty **Grad Faculty** Statistics Mgmt, Innovation&Entrepreneur **Grad Faculty** Philosophy & Religious Studies **Grad Faculty** Horticultural Science Grad Faculty Foreign Languages And Literatu **Grad Faculty** Communication **Grad Faculty** Civil Const & Environ Engineer **Grad Faculty** Agricultural & Human Sciences **Grad Faculty** Entomology & Plant Pathology Grad Faculty Biological And Agricultural En Grad Faculty **Dept of Clinical Sciences Grad Faculty** Dean's Office Research **Grad Faculty** Mathematics **Grad Faculty** Plant and Microbial Biology Grad Faculty Grad Faculty Marine, Earth And Atmospheric FIPHD **Grad Faculty** Computer Science-engr **Grad Faculty** Philosophy & Religious Studies Grad Faculty **Dept of Clinical Sciences Grad Faculty** Architecture Grad Faculty Applied Ecology Affiliate Grad Faculty

Riochemistry FIPHD History Marine Earth & Atmospheric Sci TFIS **Grad Faculty** Affiliate Grad Faculty Affiliate Grad Faculty **Grad Faculty** Affiliate Grad Faculty **Grad Faculty**

Architecture Entomology & Plant Pathology Marine Farth & Atmospheric Sci Textile & Apparel Tech & Mgmt Computer Science-Engr Civil, Const & Env Engineering Biological And Agri Engr Business Management-Poole COM Marine Earth & Atmospheric Sci Dept Molecular Biomedical Sci TELS Biological And Agri Engr English 4-H Youth Dev & Fam & Cons Sci Accounting-Poole COM Electrical & Computer Engr. Textile Engr Chemistry & Sci Music Prestage Poultry Science Electrical & Computer Engr. Psychology Ag & Resource Economics 4-H Youth Dev & Fam & Cons Sci Physics Chemical & Biomolecular Engr. **Biological Sciences** Architecture Marine Earth & Atmospheric Sci Marine Earth & Atmospheric Sci English Entomology & Plant Pathology Ag & Resource Economics **Biological Sciences** Chemistry Mathematics Civil, Const & Env Engineering Fitts Dept Indust & Syst Engr Physics Art and Design Public & International Affairs Communication Mathematics Entomology & Plant Pathology Electrical & Computer Engr. Mathematics Statistics Mgmt, Innovation & Entrepreneu Philosophy & Religious Studies Horticultural Science Foreign Languages and Lit Communication Civil, Const & Env Engineering 4-H Youth Dev & Fam & Cons Sci Entomology & Plant Pathology Biological And Agri Engr Dept of Clinical Sciences Public & International Affairs Mathematics Microbiology Marine Earth & Atmospheric Sci FIPHD Computer Science-Engr Philosophy & Religious Studies **Dept of Clinical Sciences** Architecture Applied Ecology **Biological Sciences** Marine Earth & Atmospheric Sci English Entomology & Plant Pathology Marine Earth & Atmospheric Sci Sci, Tech, Engr & Math (STEM) **Grad Faculty** Electrical & Computer Engr.

Blank Jr.Philip E. Emeritus Professor Fnglish Grad Faculty Fnglish Blank.Gary B. For & Fnvir Res Acad Research Grad Faculty For & Envir Res Acad Research Assoc Professor Blankenship, Sylvia M. Dean's Office - CALS Grad Faculty Blanton, Richard L. Plant and Microbial Biology **Grad Faculty** Plant and Microbial Biology Professor Blikslager,Anthony T Professor Dept of Clinical Sciences Grad Faculty Dept of Clinical Sciences Bloem,Stephanie Adjunct Assoc Professor Entomology & Plant Pathology Affiliate Grad Faculty Entomology Blondin John Michael Professor College of Sciences Research Grad Faculty Physics Grad Faculty Agricultural & Human Sciences Bloom, Jessica Dara Asst Professor Agricultural & Human Sciences Bloomfield.Peter Emeritus Professor Statistics Grad Faculty Statistics Blum,Udo **Emeritus Professor** Plant and Microbial Biology **Grad Faculty** Plant and Microbial Biology Bobashev, Georgiy Adjunct Asst Professor Statistics Affiliate Grad Faculty Statistics Parks, Recreation & Tourism Mg Grad Faculty Parks Recreation & Tourism Mg Bocarro.Jason N. Professor Bochinski Jason Russell Research Asst Professor Physics Grad Faculty Physics Bociu.Lorena Viorica Assoc Professor Mathematics Grad Faculty Mathematics Boettcher III.William A Assoc Professor Public & International Affairs **Grad Faculty** Public & International Affairs Bogan, Arthur E Adjunct Professor **Biological Sciences** Affiliate Grad Faculty **Biological Sciences** Bogan, Arthur E Adjunct Asst Professor Applied Ecology Affiliate Grad Faculty Applied Ecology Bogan, Arthur E Dept-Population, Health, Pathobi Applied Ecology Adjunct Asst Professor Affiliate Grad Faculty Bogdanovich.Alexander Textile Engr Chemistry & Sci Adjunct Professor Textile Engineering, Chemistry Affiliate Grad Faculty Boggs,Belle McQuaide Assoc Professor English **Grad Faculty** English Boham, Kenneth Arnold Adjunct Asst Professor Affiliate Grad Faculty ELPHD FIPHD Bohlmann, Jonathan D Professor Business Management-Poole COM **Grad Faculty** Business Management-Poole COM Assoc Professor Bohnenstiehl.DelWayne R Marine, Earth And Atmospheric Grad Faculty Marine Earth & Atmospheric Sci Teaching Asst Professor Bohorquez, Elaine B Physiology Program Grad Faculty Prestage Poultry Science Boles.Michael A Assoc Professor Mechanical & Aerospace Engr **Grad Faculty** Mechanical & Aerospace Engr Bollmer, Grant David Asst Professor Communication Grad Faculty Communication Assoc Professor Grad Faculty English Bolonyai PhD, Agnes English Bolotnov.lgor A Assoc Professor Nuclear Engineering Grad Faculty Nuclear Engr Bondell Howard D Adjunct Professor Statistics Grad & Temp Grad Faculty Statistics Bondell.Howard D Lecturer Statistics Grad Faculty Statistics Bonin Ferreira.Juliana Lecturer Dept-Population, Health, Pathobi **Grad Faculty** Population Health&Pathobiology Bonner, James C Professor **Biological Sciences Grad Faculty Biological Sciences** Booker, Matthew Morse Assoc Professor History **Grad Faculty** History Boone, Deborah A Adjunct Assoc Professor Agricultural & Human Sciences Affiliate Grad Faculty Agricultural & Extension Edu Grad Faculty Assoc Professor Landscape Architecture Landscape Architecture Boone.Kofi Malik Boos Dennis D Professor Statistics Grad Faculty Statistics Borden,Robert C. Civil Engineering Grads & Temp **Grad Faculty** Civil Const & Environ Engineer Civil, Const & Env Engineering Borden,Robert C. Emeritus Professor Grad Faculty Borden,Roy H. **Emeritus Professor** Civil Const & Environ Engineer **Grad Faculty** Civil, Const & Env Engineering Boreman Ir John G Annlied Ecology Affiliate Grad Faculty Applied Ecology Adjunct Professor Borkowski.Kazimierz Research Professor Physics Grad Faculty Physics Grad Faculty Borski,Russell J Professor **Biological Sciences Biological Sciences** Borst,Luke B Assoc Professor Dept-Population, Health, Pathobi **Grad Faculty** Population Health&Pathobiology Boss, Charles B. Assoc Professor Chemistry **Grad Faculty** Chemistry Emeritus Named Professor Plant and Microbial Biology Plant and Microbial Biology Boss.Wendy F. **Grad Faculty** Bostick Ir George W Emeritus Professor Agricultural & Human Sciences Grad Faculty Agricultural & Extension Edu Boston, Rebecca S. Named Distinguished Professor Administration - Research Serv **Grad Faculty** Plant and Microbial Biology Bottomley,Laura J Teaching Assoc Professor Engineering-Academic Affairs **Grad Faculty** Electrical & Computer Engr. Teaching Assoc Professor Grad Faculty Electrical & Computer Engr. Bottomley,Laura J Bourham, Mohamed Abdelhay Professor Nuclear Engineering Grad Faculty Nuclear Engr Bowden.Alvshia Brooks Asst Professor ELPHD **Grad Faculty** ELPHD Bowden, Edmond Francis Professor Chemistry **Grad Faculty** Chemistry Bowden, Jared Heath Applied Ecology Affiliate Grad Faculty Sociology & Anthropology Sociology & Anthropology Bowen,Sarah K Assoc Professor **Grad Faculty** Bowers Jr, Crowell G. **Emeritus Professor** Biological And Agricultural En **Grad Faculty** Biological And Agri Engr Bowles, Tuere A. Assoc Professor FIPHD Grad Faculty FIPHD Crop & Soil Sciences Crop & Soil Sciences Bowman, Daniel C. Professor Grad Faculty Bowman, Daryl T **Emeritus Professor** Crop & Soil Sciences **Grad Faculty** Crop & Soil Sciences Boyd,Leon Carl **Emeritus Professor** Food, Bioprocess & Nutrition Sc **Grad Faculty** Food, Bioprocess & Nutrition Sc Affiliate Grad Faculty Boyd, Raymond Dean Adjunct Professor Animal Science Animal Science Boyette, Michael D Named Professor Biological And Agricultural En **Grad Faculty** Biological And Agri Engr Boyles, James C History Affiliate Grad Faculty Teaching Asst Professor History Boyles, Ryan P Adjunct Assoc Professor Marine, Earth And Atmospheric Grad Faculty Marine Earth & Atmospheric Sci Boys,Kathryn Ann Asst Professor Ag & Resource Economics **Grad Faculty** Ag & Resource Economics Adjunct Asst Professor Textile Engineering, Chemistry Affiliate Grad Faculty Textile Engr Chemistry & Sci Boyter Jr. Henry Alfred Electrical & Computer Engr. Bozkurt, Alper Yusuf Assoc Professor Electrical & Computer Engr. **Grad Faculty** Braden Jeffery P Professor College Of Humanities & Soc SC Grad Faculty Psychology Bradford Marianne Accounting-Poole COM Professor Accounting-Poole COM Grad Faculty Bradford, Philip David Assoc Professor Textile Engineering, Chemistry **Grad Faculty** Textile Engr Chemistry & Sci Bradley Jr, Julius R. **Emeritus Professor** Entomology & Plant Pathology **Grad Faculty** Entomology Horticultural Science Grad Faculty Horticultural Science Bradley,Lucy K Assoc Professor Bradley, Michael Lee Adjunct Asst Professor Dept-Population, Health, Pathobi Affiliate Grad Faculty Population Health&Pathobiology Brady.Kevin P. Adjunct Asst Professor ELPHD Affiliate Grad Faculty ELPHD Braga, Cristina Teaching Asst Professor **ELPHD** Affiliate Grad Faculty **ELPHD** Bragg-Sitton, Shannon Michelle Adjunct Professor **Nuclear Engineering** Affiliate Grad Faculty Nuclear Engr Braham, Richard Riley For & Envir Res Acad Research **Grad Faculty** For & Envir Res Acad Research Professor Braithwaite, Susan Smith Adjunct Asst Professor ELPHD Affiliate Grad Faculty ELPHD Brake, John Thomas Named Distinguished Professor Prestage Poultry Science **Grad Faculty** Prestage Poultry Science

Art and Design

ELPHD

Entomology & Plant Pathology

Grad Faculty

Grad Faculty

Affiliate Grad Faculty

Art and Design

ELPHD

Entomology & Plant Pathology

Brandeis Susan D

Brander, Bryan

Brandenburg, Rick Lynn

Professor

Named Distinguished Professor

Adjunct Asst Professor

Branoff Theodore I Branson Bruce C Braun.Scott Anthony Braunbeck, Helga G Brazel Joseph F Breen, Matthew Breidt Frederick Breitschwerdt, Edward Bealmear Brennan, Michael

Brenner, Donald W Bressler, Eugene H Breuhaus, Babetta Ann

Brolez Franc

Bridgwater, Floyd Emmitt Brill Jr, Earl Downey Brisson.Robert C. Bristol, David G. Brody, Arnold R. Bromley,Peter T Brookins, Craig C Brooks.Wavne M. Broome, Stephen W. Brothers.Gene Leroy Browdy.Ronisha Witlee Brown Jr, Talmage T. Brown, Alvin B.

Brown, Ashley Carson Brown, Christopher S Brown.Dennis T Brown Henry S Brown.James W Brown, John D Brown,Otis B Brown, Robert D Brown.Zachary Steven Brown-Guedira Gina

Brownie.Cavel Brownie,Cavell Bruhaker Frik Matthews Bruce.Jacklyn A Bruck,Robert I. Brudno PhD, Yevgeny

Browne, Nimet Sadiye

Bruneau, Arthur Henry Bruner PhD.David Allen Brunet James R

Bruno-Barcena, Jose Manuel Bryan, Robert S.

Bryant, Matthew Buchwalter, David Buckel, Jeffrey A. Buckless, Frank Alan Orth Buckner, Gregory D

Buhler, Wayne G Buie, Timothy W Bull,Leonard S Bullock.Karen Bulusu,Subrahmanyam Bumgardner, Carl L.

Bunds,Kyle S Buol, Stanley W. Buol, Stanley W.

Buongiorno-Nardelli Marco Burchell II, Michael R Burgess.Helen Jane Burke, Daniel Joseph Burkey.Kent Oliver Burkhart, Harold Eugene Burkholder, Joann M. Burleson, Gary Ray Burnette, Jennifer Leslie Burrack, Hannah J Burton, James D. Burton, Joseph William Busch, Kirstin Collette Rogis

Bush, Kimberly Ann Butcher, Kenneth Roy Bykova, Marina F. Byrd, Gregory T Byrd.Medwick V Byrne, Paul Kevin

Professor Adjunct Assoc Professor

Assoc Professor Professor Professor USDA Professor Professor

Professor

Adjunct Asst Professor Named Distinguished Professor

Professo Assoc Professor Visiting Research Professor USDA Professor

Emeritus Associate Professor

Research Professor Emeritus Professor Assoc Professor Emeritus Professor Professor Assoc Professor Asst Professor **Emeritus Professor** Named Professor Asst Professor Adjunct Professor Professor Emeritus Professor Professor Professor Research Professor

Asst Professor USDA Professor Clinical Asst Professor

Emeritus Professor Adjunct Assoc Professor Assoc Professor

Asst Professor **Emeritus Professor** Adjunct Professor Assoc Professor Assoc Professor **Emeritus Professor** Asst Professor Professor Professor Professor Professor Professor Assoc Professor Emeritus Professor Professor Adjunct Assoc Professor

Professor Asst Professor

Emeritus Distinguished Prof Adjunct Professor Assoc Professor Assoc Professor Professor USDA Professor Adjunct Professor Named Distinguished Professor Adjunct Professor Assoc Professor Professor Assoc Professor Emeritus USDA Prof Asst Professor Teaching Assoc Professor

Professor Professor Teaching Assoc Professor Asst Professor

Sci Tech Engr & Math (STEM) Accounting-Poole COM Marine Farth And Atmospheric Foreign Languages And Literatu Accounting-Poole COM Dept Molecular Biomedical Scie Food Bioprocess & Nutrition Sc Dept of Clinical Sciences Marine, Earth And Atmospheric Materials Science & Engineering Landscape Architecture Dept of Clinical Sciences Computer Science-engr For & Envir Res Acad Research Institute For Trans Research &

Sociology & Anthropology College of Sciences - Dean Dept Molecular Biomedical Scie Applied Ecology Psychology

Entomology & Plant Pathology Crop & Soil Sciences Parks, Recreation & Tourism Mg English

Dept-Population, Health, Pathobi Ag & Resource Economics Biomedical Program - ENG Plant and Microbial Biology Biochemistry

Marine, Earth And Atmospheric **Biological Sciences** Physics

NC Inst of Climate Studies College of Natural Resources Ag & Resource Economics Cron & Soil Sciences Dept of Clinical Sciences Horticultural Science

Statistics Nuclear Engineering Agricultural & Human Sciences Entomology & Plant Pathology Biomedical Program - ENG Crop & Soil Sciences Textile & Apparel, Technology

Public & International Affairs Plant and Microbial Biology Philosophy & Religious Studies Mechanical & Aerospace Engr Biological Sciences Applied Ecology Dean's Office-Poole COM Mechanical & Aerospace Engr Horticultural Science Graphic & Industrial Design Animal Science

Social Work Marine, Earth And Atmospheric Chemistry

Parks, Recreation & Tourism Mg Crop & Soil Sciences Crop & Soil Sciences Physics

Biological And Agricultural En English

Biological Sciences Crop & Soil Sciences For & Envir Res Acad Research Applied Aquatic Ecology Center **Dept of Clinical Sciences** Psychology

Entomology & Plant Pathology Horticultural Science Crop & Soil Sciences Sci, Tech, Engr & Math (STEM) Parks, Recreation & Tourism Mg

Philosophy & Religious Studies Electrical & Computer Engr. Forest Biomaterials Marine, Earth And Atmospheric

Dairy Records Processing

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Accounting-Poole COM Marine Earth & Atmospheric Sci Foreign Languages and Lit Accounting-Poole COM Dept Molecular Biomedical Sci Food Bioprocess & Nutrition Sc Dept of Clinical Sciences Marine Earth & Atmospheric Sci Materials Science & Engineering Landscape Architecture Population Health&Pathobiology Computer Science-Engr For & Envir Res Acad Research Civil, Const & Env Engineering Sociology & Anthropology

Dept Molecular Biomedical Sci Applied Ecology Psychology Entomology Soil Science Parks Recreation & Tourism Mg

English Population Health&Pathobiology Ag & Resource Economics Biomedical Program-Engineering Plant and Microbial Biology Biochemistry

Marine Earth & Atmospheric Sci

Biological Sciences Physics

Marine Earth & Atmospheric Sci

Ag & Resource Economics Cron & Soil Sciences **Dept of Clinical Sciences**

Statistics Nuclear Engr Agricultural & Extension Edu

Biomedical Program-Engineering Crop & Soil Sciences Textile & Apparel Tech & Mgmt Public & International Affairs Plant and Microbial Biology Philosophy & Religious Studies Mechanical & Aerospace Engr **Biological Sciences** Applied Ecology Accounting-Poole COM Mechanical & Aerospace Engr Horticultural Science

Graphic & Industrial Design Animal Science Social Work Marine Earth & Atmospheric Sci

Chemistry Parks Recreation & Tourism Mg

Soil Science Physics

Biological And Agri Engr English **Biological Sciences** Crop & Soil Sciences For & Envir Res Acad Research Applied Ecology **Dept of Clinical Sciences** Psychology Entomology & Plant Pathology

Horticultural Science Crop & Soil Sciences Sci, Tech, Engr & Math (STEM) Parks Recreation & Tourism Mg

Philosophy & Religious Studies Electrical & Computer Engr. **Forest Biomaterials** Marine Earth & Atmospheric Sci Cahas Mijares Ashly Margot Caddell PhD Joseph William Cahoon Charles William Caldwell,Peter Vernon Call, Douglas Franklin Callahan, Benjamin John Callanan Roger A Callaway, Robert David Calvi.Michele Gian Campbell, Jennifer L Campbell,Stephen LaVern Campbell, William V. Cannon Ronald Eugene Cannon, Ronald Eugene Cannon,Susan C Cantrell.Keri B Cao,Linyou Capanema.Ewellyn A Caple Patricia C. Caplen, Natasha Jane Carawan.Rov E Carbone,Ignazio Carbone, Mary Anna Carbonell Ruben G. Cardinal, Andrea J Cardoza, Yasmin Judith Carlson.Gerald A Carlton, Ann Marie Grover Carmichael Halbert H. Carpenter PhD, Pamela Page Carr.Jon Carrier, Sarah J Carroll Jr, Daniel E Carroll, John W Carson.Susan B Cartee Lianne A Carter Jr, George L Carter.Glenda S. Carter, Michael P. Carter Thomas A Carter.Thomas E. Caruolo, Edward V. Carver, Donna K Case, Daniel Troy Casev.David S. Casey, Warren Michael Cason,Franklin D Casper, Jonathan M Cass, Cheryl Parzel Cassel, Donald K. Cassill PhD.Nancy Louise Casstevens, Willa Jeanne Castellano, Felix Nicholas Castillo, Miguel Sebastian Castorena, Cassandra Alison Castro Bolinaga.Celso Francisco Catignani.George L. Catts, Glenn P Cavanagh, John Cavanagh,John Cawthon, Tony W Caye PhD, Joanne Snyder Cevhan, Elvan

Chabay, Ruth W. Chakrabortty, Aranya Champion, Brenda D Chandler.Richard E. Chang, Chih-Hao Chang, Hou-Min Chang,Simon W Chang, Wei-Chen Chao, Allen C. Chapman, Benjamin James Chapman, Diane D

Chapman, Lisa McNew

Chapman, Stephen N

Charney, Joseph J

Chen.Karen Boru

Chen.Crvstal

Chen,Wei

Charlton, Harvey Johnson

Asst Professor Adjunct Asst Professor Asst Professor Adjunct Asst Professor Asst Professor Asst Professor Adjunct Asst Professor Adjunct Professor

Teaching Assoc Professor Professor Emeritus Professor Adjunct Professor Adjunct Asst Professor

Adjunct Asst Professor Assoc Professor Adjunct Assoc Professor Emeritus Associate Professor Adjunct Professor **Emeritus Professor** Professor Research Asst Professor Named Distinguished Professor

Adjunct Professor **Emeritus Professor** Adjunct Asst Professor **Emeritus Professor** Adjunct Asst Professor Named Distinguished Professor Assoc Professor **Emeritus Professor** Professor Assoc Professor Teaching Assoc Professor **Emeritus Professor** Emeritus Associate Professor Professor Emeritus Professor USDA Professor **Emeritus Professor** Professo Assoc Professor Adjunct Asst Professor Adjunct Assoc Professor Asst Professor Assoc Professor Teaching Assoc Professor Emeritus Professor

Assoc Professor Professor Asst Professor Asst Professor Asst Professor Emeritus Professor

Adjunct Professor Research Professor Professor Adjunct Asst Professor Research Assoc Professor **Emeritus Professor** Assoc Professor Teaching Asst Professor Emeritus Professor Assoc Professor **Emeritus Professor** Adjunct Professor Asst Professor **Emeritus Associate Professor** Assoc Professor Teaching Professor Adjunct Asst Professor **Emeritus Associate Professor** Emeritus Asst Professor Adjunct Asst Professor Asst Professor Asst Professor Adjunct Asst Professor

Civil Const & Environ Engineer History Crop & Soil Sciences For & Envir Res Acad Research Civil Const & Environ Engineer Dept-Population, Health, Pathobi Student Conduct Electrical & Computer Engr. Civil Const & Environ Engineer Biological Sciences Mathematics Entomology & Plant Pathology Biological Sciences Genetics Architecture Biological And Agricultural En Materials Science & Engineering Forest Biomaterials Communication Dept-Population, Health, Pathobi Food, Bioprocess & Nutrition Sc Entomology & Plant Pathology Biological Sciences BTEC-Biomfg Training Ed Ctr Crop & Soil Sciences Entomology & Plant Pathology Ag & Resource Economics Marine, Earth And Atmospheric Chemistry FREEDM Center Mgmt, Innovation&Entrepreneur TELS Food, Bioprocess & Nutrition Sc Philosophy & Religious Studies Quality Enhancement Plan Biomedical Program - ENG Adult & Higher Education Sci, Tech, Engr & Math (STEM) Graduate School-Dean's Office Prestage Poultry Science Crop & Soil Sciences Animal Science Prestage Poultry Science Sociology & Anthropology Animal Science Microbiology English Parks, Recreation & Tourism Mg Materials Science & Engineering Crop & Soil Sciences Academic Programs Social Work

Chemistry Crop & Soil Sciences Civil Const & Environ Engineer Biological And Agricultural En Food Bioprocess & Nutrition Sc For & Envir Res Acad Research Biochemistry Biochemistry

FIPHD ELPHD Statistics **Physics** Electrical & Computer Engr. ELPHD

FIPHD

Mathematics Mechanical & Aerospace Engr Forest Biomaterials Marine, Earth And Atmospheric

Chemistry Civil Const & Environ Engineer Agricultural & Human Sciences

FIPHD Business Management-Poole COM Mathematics Marine, Earth And Atmospheric

TFIS

Fitts Dept Indust & Syst Engr Mathematics

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Affiliate Grad Faculty

Civil Const & Env Engineering History Cron & Soil Sciences For & Envir Res Acad Research Civil, Const & Env Engineering Dept Molecular Biomedical Sci

Electrical & Computer Engr. Civil, Const & Env Engineering **Biological Sciences** Mathematics Entomology **Biological Sciences** Genetics

Biological And Agri Engr Materials Science & Engineering Forest Biomaterials Communication Population Health&Pathobiology Food, Bioprocess & Nutrition Sc Entomology & Plant Pathology Biological Sciences Chemical & Biomolecular Engr.

Entomology & Plant Pathology Ag & Resource Economics Marine Earth & Atmospheric Sci Chemistry Sci, Tech, Engr & Math (STEM) Business Management-Poole COM **Elementary Education** Food, Bioprocess & Nutrition Sc Philosophy & Religious Studies Plant and Microbial Biology Biomedical Program-Engineering Adult & Higher Education Sci, Tech, Engr & Math (STEM) English Prestage Poultry Science Crop & Soil Sciences Animal Science

Microbiology English Parks Recreation & Tourism Mg Materials Science & Engineering Soil Science

Prestage Poultry Science

Animal Science

Sociology & Anthropology

Social Work Chemistry Crop & Soil Sciences Civil, Const & Env Engineering Biological And Agri Engr Food Bioprocess & Nutrition Sc.

Biochemistry Biochemistry FIPHD ELPHD Statistics Physics

Electrical & Computer Engr. ELPHD Mathematics

Mechanical & Aerospace Engr Forest Biomaterials

Marine Earth & Atmospheric Sci Chemistry

Civil, Const & Env Engineering 4-H Youth Dev & Fam & Cons Sci

FIPHD FIPHD

Business Management-Poole COM Mathematics

Marine Earth & Atmospheric Sci TFIS

Fitts Dept Indust & Syst Engr Mathematics

Chen Wei Lecturer Mathematics Affiliate Grad Faculty Accounting-Poole COM Chen.Yuang-Sung Al Grad Faculty Professor Biological And Agricultural En Cheng, Jay Jiayang Professor Grad Faculty Cheng,Ke Assoc Professor Dept Molecular Biomedical Scie **Grad Faculty** Cheng, Yang Asst Professor Communication Grad Faculty Cherry, Megan L Asst Professor Grad Faculty History Chertock Alina Emil Mathematics Grad Faculty Professor Emeritus Research Assoc Prof Biological And Agricultural En Chescheir, George M. Grad Faculty Cheshire, Heather Mcrae For & Envir Res Acad Research Grad Faculty Chi,Eric Culbert Asst Professor Statistics **Grad Faculty** Chi,Min Computer Science-engr Grad Faculty Asst Professor Chiang, Vincent L C Named Distinguished Professor Forest Biotech Program **Grad Faculty** Childs.Nicole Marie Teaching Asst Professor FIPHD Affiliate Grad Faculty Chinn.Mari S Professor Biological And Agricultural En **Grad Faculty** Chirkova,Rada Yuryevna Assoc Professor Computer Science-engr **Grad Faculty** Cho, Seong Hee Asst Professor Psychology **Grad Faculty** Cho,Soolyeon Assoc Professor Architecture Grad Faculty Choct.Mingan Prestage Poultry Science Affiliate Grad Faculty Adjunct Professor Chou.Wu-show Emeritus Professor Computer Science-engr Grad Faculty Chow, Mo-Yuen Professor Electrical & Computer Engr. **Grad Faculty** Affiliate Grad Faculty Chow.Shein-Chung Adjunct Professor Statistics Christensen, Vern L. **Emeritus Professor** Prestage Poultry Science **Grad Faculty** Dept of Clinical Sciences Christiansen.Emily Fenimore Affiliate Grad Faculty Adjunct Asst Professor Chromy, James Raymond Adjunct Professor Statistics Affiliate Grad Faculty Chu, Moody Ten-Chao Professor Mathematics **Grad Faculty** Chukwu, Ethelbert N. **Emeritus Professor** Mathematics **Grad Faculty** Grad Faculty Chung,Kwong T. **Emeritus Professor** Physics Chung.Lung-ock Professor Mathematics Grad Faculty Chung.Sharon Yeokyung Teaching Asst Professor ELPHD Grad Faculty Clapp. Timothy Gladstone Professor Textile & Apparel, Technology **Grad Faculty** Clapp, Timothy Gladstone Professor Textile Engineering, Chemistry **Grad Faculty** Clark Jr, James W **Emeritus Professor** English **Grad Faculty** Clark,Aaron Professo Sci, Tech, Engr & Math (STEM) **Grad Faculty** Clark, Brett L. Adjunct Asst Professor Sociology & Anthropology Affiliate Grad Faculty Economics-Poole COM Grad Faculty Clark.Robert L Professor Clark.Roger Harrison Architecture Grad Faculty Clark,Tony F Adjunct Professor Marine, Earth And Atmospheric Affiliate Grad Faculty Clarke,Bruce Kurk Adjunct Professor Entomology & Plant Pathology Affiliate Grad Faculty Clarke,Laura I Professor **Grad Faculty** Physics Assoc Professor Dent-Population Health Pathobi Grad Faculty Clarke Susan T Assoc Professor Classen.John J Biological And Agricultural En **Grad Faculty** Clerkin, Richard M Professor Institute for Nonprofits **Grad Faculty** Sociology And Anthropology **Grad Faculty** Clifford II, William B. **Emeritus Professor** Clouse,Steven D **Emeritus Professor** Horticultural Science **Grad Faculty** Affiliate Grad Faculty Cobb.David T. Adjunct Asst Professor Applied Ecology Cobb Grover Cleveland Emeritus Associate Professor Physics Grad Faculty Cobb, Michael D Assoc Professor Public & International Affairs **Grad Faculty** Coble, Harold D. **Emeritus Professor** Crop & Soil Sciences **Grad Faculty** Public & International Affairs Coe, Charles K. **Emeritus Professor Grad Faculty** Coffey,Max T. Animal Science Affiliate Grad Faculty Coffin.Marie A Adjunct Professor Affiliate Grad Faculty Mathematics Coggburn,Jerrell D Professor Public & International Affairs Grad Faculty Cohen, Allen C Research Professor Entomology & Plant Pathology Affiliate Grad Faculty Cohen, Jo-Ann D. **Grad Faculty** Professor Mathematics Cohen,Paul Named Professor Fitts Dept Indust & Syst Engr **Grad Faculty** Cole-Husseini, Jacqueline Asst Professor Biomedical Program - ENG Grad Faculty Coll-Barreu.Juan Assoc Professor Architecture Grad Faculty Collazo, Jaime A. USDI Professor Applied Ecology **Grad Faculty** Collazo,Ramon R Assoc Professor Materials Science & Engineering **Grad Faculty** Colle.Brian A Adjunct Professor Marine, Earth And Atmospheric Affiliate Grad Faculty Collins, Guy David Extension Associate Professor Crop & Soil Sciences **Grad Faculty** Collins.William K. **Emeritus Named Professor** Crop & Soil Sciences Grad Faculty Combettes.Patrick Louis Professor Mathematics Grad Faculty Chemistry Comins, Daniel L. **Emeritus Professor Grad Faculty** Comstock,Gary L Philosophy & Religious Studies Grad Faculty Conant, Gavin Clay Assoc Professor **Biological Sciences Grad Faculty** Confrey.lere Named Distinguished Univ Prof Sci. Tech. Engr & Math (STEM) Grad Faculty Affiliate Grad Faculty Conolly.Rory B Adjunct Professor Statistics Conrad.Brad Richard Adjunct Asst Professor Physics Affiliate Grad Faculty Conrad, Hans **Emeritus Professor** Materials Science & Engineering **Grad Faculty** Grad Faculty Cook Jr, James W **Emeritus Professor** Physics **Grad Faculty** Cook, Rachel Louise Asst Professor The Forest Nutrition Cooperati Adjunct Asst Professor Affiliate Grad Faculty Cooke James A Mechanical & Aerospace Engr Cooper, Andrew A. Teaching Asst Professor Mathematics Affiliate Grad Faculty Cooper, Arthur W. Emeritus Professor For & Envir Res Acad Research **Grad Faculty** Cooper, Caren Beth Research Assoc Professor For & Envir Res Acad Research **Grad Faculty** Cooper,Richard J Professor Crop & Soil Sciences **Grad Faculty** Cooper,William J Adjunct Professor Marine, Earth And Atmospheric Affiliate Grad Faculty Cope,Will Allen Emeritus Professor Crop & Soil Sciences **Grad Faculty** Cope, William Gregory Named Professor Applied Ecology **Grad Faculty** Copeland, Billy J. Applied Ecology **Grad Faculty Emeritus Professor**

Mathematics Accounting-Poole COM Biological And Agri Engr Dept Molecular Biomedical Sci Communication History Mathematics Biological And Agri Engr Statistics Computer Science-Engr For & Envir Res Acad Research FIPHD Biological And Agri Engr Computer Science-Engr Psychology Architecture Prestage Poultry Science Computer Science-Engr Electrical & Computer Engr. Statistics Prestage Poultry Science Dept of Clinical Sciences Statistics Mathematics Mathematics Physics Mathematics ELPHD Textile & Apparel Tech & Mgmt Textile & Apparel Tech & Mgmt English Sci, Tech, Engr & Math (STEM) Sociology & Anthropology Economics-Poole COM Marine Earth & Atmospheric Sci Entomology & Plant Pathology Physics Biological And Agri Engr Public & International Affairs Sociology And Anthropology

Population Health&Pathobiology Horticultural Science Applied Ecology Physics **Public & International Affairs** Crop & Soil Sciences Public & International Affairs

Mathematics **Public & International Affairs** Entomology & Plant Pathology Mathematics Fitts Dept Indust & Syst Engr

Biomedical Program-Engineering Architecture Applied Ecology

Materials Science & Engineering Marine Earth & Atmospheric Sci Crop & Soil Sciences

Crop & Soil Sciences Mathematics Chemistry Philosophy & Religious Studies

Biological Sciences Sci, Tech, Engr & Math (STEM) Statistics

Physics

Materials Science & Engineering

For & Envir Res Acad Research Mechanical & Aerospace Engr Mathematics

> For & Envir Res Acad Research For & Envir Res Acad Research Crop & Soil Sciences

Marine Earth & Atmospheric Sci Crop & Soil Sciences

Applied Ecology Applied Ecology Corbett David Reide Adjunct Asst Professor Corbin Frederick Thomas Emeritus Professor Corn Jenifer Osullivan Adjunct Asst Professor Friday Institute Cornwell, John C. Emeritus Professor Animal Science Coronel, Pablo Marcelo Adjunct Professor Corral,Eduardo C Asst Professor English Correa Maria T Professor Cosco, Nilda Graciela Research Assoc Professor Costanza, Jennifer Kwasny Research Asst Professor **Emeritus Professor** Cotanch, Stephen R Physics Coulston, John Wesley Adjunct Asst Professor Asst Professor Coupet, Jason Alix Covington, David H. Emeritus Associate Professor English Cowen, Peter Assoc Professor Cowger, Christina USDA Professor Cowley, Michael Anthony Asst Professor Cowling, Ellis B. Emeritus Professor Cox.Chandra D Art and Design Professor Craig, Elizabeth Ann Assoc Professor Communication Craig,Lee A Professor Craig, Stephen Bartholomew Assoc Professor Psychology Crawford, Elizabeth M. **Emeritus Professor** Crav.Paula J Professo Named Distinguished Professor Creamer, Nancy G Crickenberger,Roger G. **Emeritus Professor** Animal Science Crisci, Elisa Asst Professor Crisp,Denise M Professor Crisp James E Emeritus Professor History Crissman, Dorothy E Teaching Asst Professor TELS Crook.Nathan Charles Asst Professor Croom Jr.Warren J **Emeritus Professor** Croom, Dan Barry **Emeritus Professor** Crosbie, Christopher James Assoc Professor English Crossland, Cathy L. Professor TELS Crouse, David A Professor Crow Johnny I Emeritus Asst Professor Crowley, Martha L. Assoc Professor Crozier,Carl R Professo Crumbley, Deidre H **Emeritus Professor** Cruse PhD Glenn Paul Asst Professor Asst Professor Crver-Coupet.Qiana Social Work Cubbage,Frederick Willis Professor Cubeta, Marc A Professor Culbreth Jr, Charles Thomas **Emeritus Distinguished Prof** Cullen.John Michael Professor Cullinan Douglas A Professor Cumbie, William P Adjunct Asst Professor Cunningham, Joseph W. Emeritus Professor Psychology Cunningham, Mary K. Assoc Professor Cuomo,Jerome J Distinguished Professor Curington.Celeste Asst Professor Curley, Patrick Wilkie Curley, Patrick Wilkie Adjunct Asst Professor Currie, Nancy Jane Adjunct Assoc Professor Curtis, Patricia Ann Professor Curtis, Stephanie E. Emeritus Professor Biological Sciences Cutts, Bethany Brooke Asst Professor Cwik, Paul **Teaching Professor** Czaja,Ronald F **Emeritus Associate Professor** Dahl, Johannes Michael Leopold Adjunct Asst Professor Dai, Huaiyu Professor Daley.Dennis M. Professor Danehower, David A. Emeritus Associate Professor Danek Burgess PhD, Krisstina Stefanie Daniel III,Louis Broaddus Adjunct Asst Professor Applied Ecology Daniele,Michael Asst Professor Daniels III. Harry Valentine Professor Daniels.Karen E Professor **Physics**

Assoc Professor **Emeritus Professor** Professor Professor Assoc Professor Named Distinguished Professor Adjunct Professor Named Professor Professor **Emeritus Professor** Emeritus Professor **Emeritus Associate Professor** Assoc Professor

College Of Education

Statistics

Foreign Languages And Literatu

Food, Bioprocess & Nutrition Sc

Plant and Microbial Biology

Dept of Clinical Sciences

Computer Science-engr

Plant and Microbial Biology

Sociology And Anthropology

Grad Faculty

Grad Faculty

Grad Faculty

Danielsen.Bartlev R

Danielson, Leon E.

Dannels.Deanna P

Daub, Margaret E.

Davidian, Marie

Davies, Eric

Davis.Adam C

Davis, Dennis Scott

Daubert, Christopher R

Davidson, Michael G.

Davis Jr.Edward Willmore

Danowitz, Mary Ann Darhower Mark Anthony

Marine Farth And Atmospheric Affiliate Grad Faculty Cron & Soil Sciences Grad Faculty Affiliate Grad Faculty **Grad Faculty** Food, Bioprocess & Nutrition Sc Affiliate Grad Faculty Grad Faculty Dept-Population.Health.Pathobi Grad Faculty Landscape Architecture Affiliate Grad Faculty For & Envir Res Acad Research Grad Faculty **Grad Faculty** For & Envir Res Acad Research Affiliate Grad Faculty Public & International Affairs Grad Faculty Grad Faculty Dept-Population, Health, Pathobi Grad Faculty Entomology & Plant Pathology **Grad Faculty Grad Faculty** College of Natural Resources Grad Faculty Grad Faculty Grad Faculty Economics-Poole COM **Grad Faculty** Grad Faculty Sociology & Anthropology **Grad Faculty** Dept-Population, Health, Pathobi Grad Faculty Horticultural Science Grad Faculty **Grad Faculty** Dept-Population, Health, Pathobi **Grad Faculty** Graphic & Industrial Design **Grad Faculty** Grad Faculty Affiliate Grad Faculty Chemical & Biomolecular Engr Grad Faculty Prestage Poultry Science **Grad Faculty** Agricultural & Human Sciences **Grad Faculty Grad Faculty** Grad Faculty Grad Faculty Crop & Soil Sciences Sci. Tech. Engr & Math (STEM) **Grad Faculty** Sociology & Anthropology **Grad Faculty** Crop & Soil Sciences Grad Faculty Interdisciplinary Studies **Grad Faculty** Dent Molecular Biomedical Scie Grad Faculty **Grad Faculty** For & Envir Res Acad Research **Grad Faculty Grad Faculty** Entomology & Plant Pathology Fitts Dept Indust & Syst Engr **Grad Faculty** Dept-Population.Health.Pathobi **Grad Faculty** College Of Education Grad Faculty For & Envir Res Acad Research Affiliate Grad Faculty **Grad Faculty** Philosophy & Religious Studies Grad Faculty Grad Faculty Materials Science & Engineering Sociology & Anthropology **Grad Faculty** The Science House-Sciences Affiliate Grad Faculty Marine, Earth And Atmospheric Affiliate Grad Faculty Fitts Dept Indust & Syst Engr Affiliate Grad Faculty Prestage Poultry Science **Grad Faculty** Grad Faculty Grad Faculty Parks, Recreation & Tourism Mg Economics-Poole COM Affiliate Grad Faculty Sociology & Anthropology **Grad Faculty** Marine, Earth And Atmospheric Affiliate Grad Faculty Electrical & Computer Engr. **Grad Faculty** Public & International Affairs Grad Faculty Crop & Soil Sciences Grad Faculty BTEC-Biomfg Training Ed Ctr Affiliate Grad Faculty Affiliate Grad Faculty Electrical & Computer Engr. **Grad Faculty** Dean's Office - CALS Grad Faculty Grad Faculty Business Management-Poole COM **Grad Faculty** Ag & Resource Economics **Grad Faculty** Grad Faculty College Of Humanities & Soc SC

Crop & Soil Sciences TFIS Animal Science Food, Bioprocess & Nutrition Sc English Population Health&Pathobiology Landscape Architecture For & Envir Res Acad Research Physics For & Envir Res Acad Research Public & International Affairs Fnølish Population Health&Pathobiology Entomology & Plant Pathology Biological Sciences Entomology & Plant Pathology Art and Design Communication Economics-Poole COM Psychology Sociology & Anthropology Population Health&Pathobiology Horticultural Science Animal Science Population Health&Pathobiology Graphic & Industrial Design History TELS Chemical & Biomolecular Engr. Prestage Poultry Science Agricultural & Extension Edu English TELS Soil Science Sci, Tech, Engr & Math (STEM) Sociology & Anthropology Soil Science Interdisciplinary Studies Dent Molecular Biomedical Sci. Social Work For & Envir Res Acad Research Entomology & Plant Pathology Fitts Dept Indust & Syst Engr Population Health&Pathobiology TFIS For & Envir Res Acad Research Psychology Philosophy & Religious Studies Materials Science & Engineering Sociology & Anthropology Marine Earth & Atmospheric Sci Fitts Dept Indust & Syst Engr Prestage Poultry Science Biological Sciences Parks Recreation & Tourism Mg Economics-Poole COM Sociology & Anthropology Marine Earth & Atmospheric Sci Electrical & Computer Engr. Public & International Affairs Crop & Soil Sciences Applied Ecology Electrical & Computer Engr. Applied Ecology **Physics** Business Management-Poole COM Ag & Resource Economics

Marine Farth & Atmospheric Sci

Communication ELPHD Foreign Languages and Lit Plant and Microbial Biology Food, Bioprocess & Nutrition Sc Statistics **Dept of Clinical Sciences**

Plant and Microbial Biology

Sociology And Anthropology

Computer Science-Engr

Davis Fric Lee Davis Hawthorne A Davis Jack Parker Davis, Jeanine M. Davis, Jennifer Lynn Davis.Jerry M. Davis K Shannon Davis, Meredith Joy Davis.Robert F. Davis, William Rhett Davis, William Robert Davis-Bauer.Heather A Davis-Gardner, Angela Mackie Dawes, Gregory A. Dayton, Paul A De Coster, Stacy M. De Gezelle, Jillian Marie De Los Reyes III, Francis Lajara DeBord.Karen B DeCarolis, Joseph F DeCuir-Gunby, Jessica Theresa DeFrancesco,Teresa C DeGrand.Alexander J DeHertogh, August A. DeJoy, Daniel A. DeJoy, Daniel A. DeLuca, V. William DeLuca, V. William DeMaster David John DePerno.Christopher S DeSimone,Joseph M DeSoucey, Michaela Anne DeWoskin,Robert S Deal.Earl L Dean.Alexander G. Dean.Gregg A Dean,Lisa Louise Dean,Ralph A Deardorff,Darla Kay Degernes Laurel A Deiters.Alexander Deitz,Lewis L. Dekaney PhD, Christopher Matthew Delborne, Jason Aaron Delcambre.Carla F Delgado PhD Cesar Delk,Katherine Dellafave,L. Richard Deming, Margaret Elen DenHartog, Emiel A Dennis.Robert G Denson, Cameron DeLeon Denton, Brian Desmarais, Sarah Louise Despain, Jeffrey Scott Devetsikiotis, Mihail Devine Jr. Hugh A. Devine, Genessa Marie Devorshak, Christina Dewey,Ralph E Dewhirst, Mark W. Diaz,Lope Max Dickey, David Alan Dickey, Elizabeth Carol Dickey.Michael David Dicks,Robert S Dickson.Gary W Diebold, Jeffrey Childress Dietrich, Joel Casey Dillard,Emmett Urcey Ding.Huiling Dinh, Nam Truc Dinku.Abay Gadisa Ditto.William Lawrence Dixon.Darlene Dixon, Karrie Gibson Dobrogosz, Walter J. Doctor PhD, Daniel Hatim

Dodsworth.Robin M

Doherty, Colleen Jennifer

Doerr, Phillip David

Named Distinguished Professor **Emeritus Associate Professor** Adjunct Professor Assoc Professor Adjunct Assoc Professor Emeritus Professor Emeritus Associate Professor Emeritus Professor Emeritus Named Professor Professor Emeritus Professor Adjunct Assoc Professor Emeritus Professor Named Professor Professor Assoc Professor Teaching Asst Professor Professor Emeritus Professor Assoc Professor Professor Professor Emeritus Professor Emeritus Professor Assoc Professor **Emeritus Associate Professor** Emeritus Associate Professor Professor Professor Named Distinguished Professor Asst Professor Adjunct Assoc Professor **Emeritus Professor** Assoc Professor Professor USDA Assoc Professor Named Distinguished Professor Adjunct Asst Professor Emeritus Professor Adjunct Professor Emeritus Professor Asst Professor Assoc Professor Teaching Asst Professor Asst Professor Adjunct Asst Professor **Emeritus Professor** Professor Assoc Professor Assoc Professor Asst Professor Adjunct Assoc Professor Assoc Professor Assoc Professor Adjunct Professor **Emeritus Professor** Lecturer Adjunct Asst Professor Named Professor Adjunct Professor Assoc Professor Named Professor Professor Named Professor **Emeritus Associate Professor** Emeritus Professor Asst Professor Asst Professor **Emeritus Associate Professor** Assoc Professor Professor Research Asst Professor Professor Adjunct Assoc Professor Adjunct Asst Professor **Emeritus Professor** Adjunct Assoc Professor Assoc Professor

Emeritus Professor

Asst Professor

Entomology & Plant Pathology Textile & Apparel, Technology Food Bioprocess & Nutrition Sc Horticultural Science Dept-Population, Health, Pathobi Marine, Earth And Atmospheric Mgmt Innovation&Entrepreneur Graphic & Industrial Design Materials Science & Engineering Electrical & Computer Engr. Physics TELS English Foreign Languages And Literatu Biomedical Program - ENG Sociology & Anthropology Plant and Microbial Biology Civil Const & Environ Engineer Agricultural & Human Sciences Civil Const & Environ Engineer **Dept of Clinical Sciences** History Horticultural Science Communication Communication Sci, Tech, Engr & Math (STEM) Sci, Tech, Engr & Math (STEM) Marine, Earth And Atmospheric Fisheries and Wildlife Program Chemical & Biomolecular Engr Sociology & Anthropology Dept-Population, Health, Pathobi Forest Biomaterials Electrical & Computer Engr. Dept Molecular Biomedical Scie Food, Bioprocess & Nutrition Sc Entomology & Plant Pathology ELPHD Dept of Clinical Sciences Chemistry Entomology & Plant Pathology Dept Molecular Biomedical Scie For & Envir Res Acad Research Landscape Architecture Sci, Tech, Engr & Math (STEM) **Dept of Clinical Sciences** Sociology & Anthropology Doctor of Design Textile Engineering, Chemistry Biomedical Program - ENG Sci, Tech, Engr & Math (STEM) Fitts Dept Indust & Syst Engr Psychology Foreign Languages And Literatu Electrical & Computer Engr. Parks, Recreation & Tourism Mg Business Management-Poole COM Entomology & Plant Pathology Crop & Soil Sciences Dept Molecular Biomedical Scie Art and Design Statistics Materials Science & Engineering Chemical & Biomolecular Engr English Business Management-Poole COM Public & International Affairs Civil Const & Environ Engineer **Animal Science** English **Nuclear Engineering** Physics **Physics** Dept Molecular Biomedical Scie **ELPHD** Prestage Poultry Science Marine, Earth And Atmospheric English For & Envir Res Acad Research Biochemistry

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Entomology & Plant Pathology Textile & Apparel Tech & Mgmt

Food, Bioprocess & Nutrition Sc

Population Health&Pathobiology

Marine Earth & Atmospheric Sci

Horticultural Science

Dole John Martin Doll Barbara A Donaldson Robert Alan Dong,Jingyan Dorgeloh, Werner Gunter Dorman, David C Doster Joseph M Dougherty, Daniel B. Dow,Thomas A. Downs, Murray S. Doyle,Jon Drake, Mary Anne Drake.Timothy Arthur Dreher, Kevin L Dreher, Patrick A Dretsch.Heather Johnson Drewes, Donald William Drineas.Petros Driscoll.Catherine M Dubljevic, Veljko Duca, Alina Nicoleta Duckworth,Owen W Ducoste.Joel Dudley, Marc K. Dudziak, Donald J. Duel-Hallen, Alexandra Dugba,Prince Noah Duggins, Jonathan William Dunbar, Adria Shipp Dunn, Joseph C. Dunn.Patricia C Dunn, Robert R. Dunning,Dianne Dunning, Rebecca Diane Dunphy,Edward James Dur Umut Durant, Jack D. Dutta.Rudra Dvorak, William Stephen Dve Janice A Dykstra, Michael Jack Dziak,Robert Paul Eapen,Jacob Early,Peter Joseph Earp.Julia B Easley Jr.James E Easterling, David R Eaton, Mitchell J Ebert, Kimberly Lynn Echekki, Tarek Eckerlin.Herbert Martin Edens, Frank W. Eder, Brian K Edge,Billy L Edgington, Cynthia Page Edmisten,Keith L Edwards Jr. Jack Ray Edwards.Harriett C Edwards,Linda McMurry Edwards.Michael B Efimenko,Kirill Eggleston, David B Ehm.Margaret G Eischen, Jeffrey W. Eisemann.Joar Eisen,Eugene Ekkad Srinath Varadarajan El-Masry, Nadia A El-Shafei.Ahmed Mohamed El-Shiekh, Aly H Eley, Michelle Rene Elfenbein, Johanna Rebecca Elhanafi.Driss Elkan.Gerald Hugh Elkan.Gerald Hugh Ellington, Grant H Ellis, Alan Reid Ellis,Jesse Aaron Fllison Donald C Ellovich.Risa S.

Ellson,Richard Wayne

Professor Extension Associate Professor Emeritus Professor Assoc Professor Adjunct Assoc Professor Professor Professor Assoc Professor Named Distinguished Univ Prof **Emeritus Professor** Named Distinguished Professor Named Professor Asst Professor Adjunct Professor Research Professor Asst Professor Emeritus Professor Adjunct Asst Professor Assoc Professor Asst Professor Teaching Assoc Professor Assoc Professor Professor Assoc Professor **Emeritus Professor** Professor Adjunct Assoc Professor Teaching Asst Professor Asst Professor Emeritus Professor Professor Named Professor Clinical Assoc Professor Research Asst Professor

Asst Professor **Emeritus Professor** Professo **Emeritus Professor** Adjunct Assoc Professor Emeritus Research Professor Adjunct Professor Assoc Professor Clinical Professor Assoc Professor Emeritus Professor Adjunct Professor Adjunct Asst Professor Assoc Professor Professor Emeritus Professor Professor Lecturer Research Professor Teaching Asst Professor Professor Professor Assoc Professor **Emeritus Professor** Research Assoc Professor Professor Adjunct Asst Professor Assoc Professor Professor Emeritus Named Professor Named Professor Professor Professor **Emeritus Professor** Asst Professor Asst Professor

Emeritus Professor Emeritus Professor Extension Asst Professor Asst Professor Assoc Professor **Emeritus Professor**

Adjunct Assoc Professor

CALS - Academic Programs Sea Grant Program Textile & Apparel, Technology Fitts Dept Indust & Syst Engr For & Envir Res Acad Research Dept Molecular Biomedical Scie Nuclear Engineering **Physics** Mechanical & Aerospace Engr Exec Vice Chancellor & Provost **Grad Faculty** Computer Science-engr Grad Faculty Food,Bioprocess & Nutrition Sc Grad Faculty FIPHD Dept Molecular Biomedical Scie Computer Science-engr Business Management-Poole COM **Grad Faculty** Psychology Grad Faculty Mathematics Philosophy & Religious Studies Philosophy & Religious Studies Mathematics **Crop & Soil Sciences Grad Faculty** Civil Const & Environ Engineer English **Nuclear Engineering** Electrical & Computer Engr. Biological And Agricultural En Statistics ELPHD Mathematics Agricultural & Human Sciences Applied Ecology College Of Veterinary Medicine Horticultural Science Crop & Soil Sciences Economics-Poole COM English Computer Science-engr CAMCORE-Cooperative Dept of Clinical Sciences Dept-Population.Health.Pathobi Marine, Earth And Atmospheric **Nuclear Engineering** Affiliate Grad Faculty **Dept of Clinical Sciences** Business Management-Poole COM Ag & Resource Economics Marine, Earth And Atmospheric Applied Ecology Sociology & Anthropology Mechanical & Aerospace Engr Mechanical & Aerospace Engr Prestage Poultry Science Marine, Earth And Atmospheric Civil Const & Environ Engineer Sci, Tech, Engr & Math (STEM) Crop & Soil Sciences Grad Faculty Mechanical & Aerospace Engr Agricultural & Human Sciences History Parks, Recreation & Tourism Mg Chemical & Biomolecular Engr Marine, Earth And Atmospheric Statistics Mechanical & Aerospace Engr Animal Science Animal Science

Mechanical & Aerospace Engr Materials Science & Engineering Textile Engineering, Chemistry Textile & Apparel, Technology Foreign Languages And Literatu **Dept of Clinical Sciences** BTEC-Biomfg Training Ed Ctr Microbiology Park Scholars Biological And Agricultural En

Social Work Business Management-Poole COM Physics

Sociology & Anthropology Mathematics

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Mechanical & Aerospace Engr History Computer Science-Engr

Food, Bioprocess & Nutrition Sc FIPHD

Dept Molecular Biomedical Sci Computer Science-Engr Business Management-Poole COM

Mathematics

Philosophy & Religious Studies Philosophy & Religious Studies

Mathematics Soil Science

Civil, Const & Env Engineering English

Nuclear Engr

Electrical & Computer Engr. Biological And Agri Engr

Statistics ELPHD Mathematics

4-H Youth Dev & Fam & Cons Sci Applied Ecology

Dept of Clinical Sciences Horticultural Science

Economics-Poole COM

English

Computer Science-Engr For & Envir Res Acad Research Dept of Clinical Sciences Population Health&Pathobiology Marine Earth & Atmospheric Sci

Nuclear Engr **Dept of Clinical Sciences**

Business Management-Poole COM Ag & Resource Economics Marine Earth & Atmospheric Sci

Applied Ecology Sociology & Anthropology Mechanical & Aerospace Engr Mechanical & Aerospace Engr Prestage Poultry Science Marine Earth & Atmospheric Sci Civil, Const & Env Engineering Sci, Tech, Engr & Math (STEM) Crop & Soil Sciences

Mechanical & Aerospace Engr 4-H Youth Dev & Fam & Cons Sci

History

Parks Recreation & Tourism Mg Chemical & Biomolecular Engr. Marine Earth & Atmospheric Sci

Statistics

Mechanical & Aerospace Engr Animal Science

Animal Science

Mechanical & Aerospace Engr Materials Science & Engineering Textile Engr Chemistry & Sci Textile & Apparel Tech & Mgmt Foreign Languages and Lit **Dept of Clinical Sciences**

Microbiology Microbiology Biological And Agri Engr Social Work

Business Management-Poole COM

Physics

Sociology & Anthropology

Mathematics

Fllwood Fric I Elting, Mary Williard Ely,John F. Emanuel,Ryan E Emery, Donald Allen Emigh,Ted H. Enck.William H Ender PhD.Kenneth Lyle Ender PhD.Kenneth Lyle Enders, Jeffrey Richard Enders, Jeffrey Richard Endicott,Ronald P Engell, Miles Dean English, David J Ensign,Scott Howard Erchul, William P. Erdim,Burak Erickson.Edward W. Esbenshade.Kenneth L. Escuti, Michael James Eservel.Deniz Eslinger,Owen J Esposito PhD, Debora A. Estes.Edmund A. Estes.Patricia A Etherton, Brian John Eun, Do Young Evans Jr, Robert O Evans.Marina V Evans.Michael Alan Evans, Robert Joseph Evans, Timothy Matthew Everman, Wesley J Eward, William Curtis Fackler.Paul L Fahrenholz.Adam Charles Fair.Barbara Falk.Elisabeth Streit Falter, Michelle Marie Fang, Shu-Cherng Fang, Tiegang Fantz.Paul R. Farin, Charlotte E Farkas,Brian E Farrier.Maurice H. Fasina.Yewande O. Fathi, Yahya Faulkner, Gary Doyle Faulkner, Valerie Ness Favorov,Oleg V Fedkiw.Peter S. Fedukovich, Casie J Feeny, Thomas P. Felder, Richard M. Fell, Harrison George Fellner,Vivek Felts James Vernon Feng,Jing Fenn, Molly A Fenton, Suzanne Elizabeth Fenton, Suzanne Elizabeth Ferguson II.Stephen Clifford Ferguson, Scott M Ferket,Peter R. Fernandes, April Dawn Fernandez,Gina E Ferreira. Davis Fernandes Ferreira, Davis Fernandes Ferrier, Brad S Ferruzzi, Mario Giovanni Ferzli, Miriam G Figuers,Carol C Findley.Daniel J. Fiori, Giuseppe Fischer.Jesse Robert Fish,Richard E Fisher, Douglas Fisher, John S.

Fisher Loren R

Fites, Roger C.

Fisher.Matthew Bruce

Emeritus Professor Asst Professor Emeritus Professor Assoc Professor Emeritus Professor Assoc Professor Adjunct Asst Professor Assoc Professor Teaching Assoc Professor Adjunct Asst Professor Adjunct Asst Professor **Emeritus Professor** Asst Professor Emeritus Professor Professor Professor Assoc Professor Adjunct Professor Asst Professor Emeritus Professor Adjunct Asst Professor Professor Emeritus Professor Adjunct Professor Assoc Professor

Research Assoc Professor Teaching Assoc Professor Adjunct Assoc Professor Assoc Professor Adjunct Asst Professor Professor Asst Professor Assoc Professor Teaching Asst Professor Asst Professor Named Professor Professor Emeritus Professor Professo Adjunct Professor **Emeritus Professor** Adjunct Asst Professor Professor **Emeritus Associate Professor** Teaching Assoc Professor Research Assoc Professor Professor Assoc Professor Professor **Emeritus Named Professor** Assoc Professor Professor Adjunct Asst Professor Asst Professor Teaching Assoc Professor Adjunct Assoc Professor Adjunct Asst Professor Assoc Professor

Professor Adjunct Assoc Professor Adjunct Assoc Professor Professor Teaching Assoc Professor Adjunct Asst Professor Adjunct Asst Professor Asst Professor Research Asst Professor **Emeritus Associate Professor Emeritus Professor Emeritus Professor** Named Professor Asst Professor **Emeritus Professor**

Named Distinguished Professor

Assoc Professor

Asst Professor

College of Natural Resources Physics Civil Const & Environ Engineer For & Envir Res Acad Research Graduate School-Dean's Office **Biological Sciences** Computer Science-engr FIPHD FIPHD Ctr for Human Health & the Env METRIC Mass Spectrometry Philosophy & Religious Studies Biological Sciences FIPHD Marine, Earth And Atmospheric Psychology Architecture Economics-Poole COM Animal Science Electrical & Computer Engr. TELS Mathematics Kannapolis Research Ag & Resource Economics **Biological Sciences** Marine, Earth And Atmospheric Electrical & Computer Engr. Biological And Agricultural En Mathematics TELS Electrical & Computer Engr. Civil Const & Environ Engineer Crop & Soil Sciences Dept of Clinical Sciences Ag & Resource Economics Prestage Poultry Science Horticultural Science Marine, Earth And Atmospheric Fitts Dent Indust & Syst Engr Mechanical & Aerospace Engr Horticultural Science Animal Science Food, Bioprocess & Nutrition Sc Entomology & Plant Pathology Prestage Poultry Science Fitts Dept Indust & Syst Engr Mathematics Biomedical Program - ENG English

Chemical & Biomolecular Engr Foreign Languages And Literatu Chemical & Biomolecular Engr Ag & Resource Economics Animal Science Prestage Poultry Science Psychology Mathematics Dept-Population,Health,Pathobi **Biological Sciences** Philosophy & Religious Studies Mechanical & Aerospace Engr Prestage Poultry Science Sociology & Anthropology Horticultural Science Biochemistry Biochemistry Marine, Earth And Atmospheric Kannapolis Research Biological Sciences ELPHD Institute For Trans Research &

Economics-Poole COM

Dept of Clinical Sciences

Civil Const & Environ Engineer

Biomedical Program - ENG

Plant and Microbial Biology

Economics-Poole COM

Crop & Soil Sciences

Applied Ecology

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Animal Science Prestage Poultry Science Psychology Mathematics Population Health&Pathobiology **Biological Sciences** Philosophy & Religious Studies Mechanical & Aerospace Engr Prestage Poultry Science Sociology & Anthropology Horticultural Science Biochemistry

Marine Earth & Atmospheric Sci Food, Bioprocess & Nutrition Sc **Biological Sciences** Adult & Higher Education Civil, Const & Env Engineering Economics-Poole COM Applied Ecology **Dept of Clinical Sciences** Economics-Poole COM Civil, Const & Env Engineering Crop & Soil Sciences Biomedical Program-Engineering Plant and Microbial Biology

Fitzgerald Patrick I Assoc Professor Art and Design Grad Faculty Art and Design Fitznatrick, David Charles Affiliate Grad Faculty Teaching Asst Professor Social Work Social Work Flammer Keven Professor Dept of Clinical Sciences Grad Faculty Dept of Clinical Sciences Flath, David Joseph **Emeritus Professor** Economics-Poole COM **Grad Faculty** Economics-Poole COM Fleener Mattie Javne Professor FIPHD Grad Faculty FIPHD Fleisher, Lloyd Norman Emeritus Professor Dept Molecular Biomedical Scie Grad Faculty Dept Molecular Biomedical Sci Fleming Henry Pridgen Emeritus USDA Prof Food Bioprocess & Nutrition Sc Grad Faculty Food Bioprocess & Nutrition Sc Fleming, Jean E. Adjunct Asst Professor FIPHD Affiliate Grad Faculty Adult & Higher Education Agricultural & Human Sciences Fleming, Joy Morgan Asst Professor Grad Faculty Agricultural & Human Sciences Flinchum, Russell Alan Assoc Professor Graphic & Industrial Design **Grad Faculty** Graphic & Industrial Design Flink, Charles Albert Landscape Architecture Grad Faculty Asst Professor Grad Faculty Mathematics Flores.Kevin Bryant Mathematics Flowers IV. William Lucas Named Professor Animal Science Grad Faculty Animal Science Agricultural & Human Sciences Flowers, James L. Professor Grad Faculty Agricultural & Extension Edu Flowers, James R Clinical Assoc Professor Dept-Population, Health, Pathobi Affiliate Grad Faculty Population Health&Pathobiology Flovd.Brian Allan Assoc Professor Electrical & Computer Engr. **Grad Faculty** Electrical & Computer Engr. Floyd,Myron F Professor Parks, Recreation & Tourism Mg Grad Faculty Parks Recreation & Tourism Mg Fodor, Ronald Victor Marine, Earth And Atmospheric Grad Faculty Professor Marine Earth & Atmospheric Sci Foegeding, Edward Allen Named Distinguished Professor Grad Faculty Food Bioprocess & Nutrition Sc Food, Bioprocess & Nutrition Sc Fogle, Callie Anne Clinical Assoc Professor **Dept of Clinical Sciences** Affiliate Grad Faculty **Dept of Clinical Sciences** Fogle, Jonathan E. Dept-Population, Health, Pathobi Grad Faculty Population Health&Pathobiology Asst Professor Fogleman, April Asst Professor Food, Bioprocess & Nutrition Sc **Grad Faculty** Food, Bioprocess & Nutrition Sc Fonteno III, William Carl Horticultural Science Grad Faculty Professor Horticultural Science Emeritus Professor Industrial Design Foote.Vincent Grad Faculty Industrial Design Ford.Ericka N Asst Professor Textile Engineering, Chemistry **Grad Faculty** Textile Engr Chemistry & Sci Ford, Richard Banbury **Emeritus Professor Dept of Clinical Sciences Grad Faculty** Dept of Clinical Sciences Biomedical Program - ENG Grad Faculty Biomedical Program-Engineering Forest,M. Gregory Professor Fornaro, Robert Joseph Lecturer Computer Science-engr Grad Faculty Computer Science-Engr Emeritus Professor Computer Science-engr Grad Faculty Computer Science-Engr Fornaro, Robert Joseph Fornes.Raymond Earl Professor College of Sciences - Dean Grad Faculty Physics Fornes, Raymond Earl **Emeritus Professor** College of Sciences - Dean **Grad Faculty** Forrester, Jodi Anne Asst Professor For & Envir Res Acad Research **Grad Faculty** For & Envir Res Acad Research Physics Fortner, Brand Irving Teaching Professor Physics **Grad Faculty** Foster, Derek M. Asst Professor Dept-Population, Health, Pathobi Grad Faculty Population Health&Pathobiology Grad Faculty Psychology Foster.Lori Lea Professor Psychology Fountain.John Crothers Research Professor Marine, Earth And Atmospheric **Grad Faculty** Marine Earth & Atmospheric Sci Fountain, John Crothers **Emeritus Professor** Marine, Earth And Atmospheric **Grad Faculty** Marine Earth & Atmospheric Sci Fourches Denis Asst Professor Grad Faculty Fox, Andrew Alan Assoc Professor Landscape Architecture **Grad Faculty** Landscape Architecture Grad Faculty Fox Barbara I Emeritus Professor TELS TFIS Biological And Agricultural En Biological And Agri Engr Fox.Garev Alton Professor **Grad Faculty** Fralix, Michael Thomas Adjunct Assoc Professor Textile & Apparel, Technology Affiliate Grad Faculty Textile & Apparel Tech & Mgmt For & Envir Res Acad Research **Grad Faculty** For & Envir Res Acad Research Frampton Jr, Lewis John Professo Frank,Steven D Assoc Professor Entomology & Plant Pathology **Grad Faculty** Entomology & Plant Pathology Franke.John E. **Emeritus Professor** Mathematics **Grad Faculty** Mathematics For & Envir Res Acad Research For & Envir Res Acad Research Franklin F Carlyle Emeritus Professor Grad Faculty Franks, Robert Graham Professor Plant and Microbial Biology **Grad Faculty** Plant and Microbial Biology Franz, Jason Roy Asst Professor Biomedical Program - ENG **Grad Faculty** Biomedical Program-Engineering Grad Faculty Franzen, Stefan Professor Chemistry Chemistry Franzluebbers, Alan J USDA Professor Crop & Soil Sciences Grad Faculty Soil Science Franzon, Paul D. Distinguished Professor Electrical & Computer Engr. **Grad Faculty** Electrical & Computer Engr. Grad Faculty Frederick, Douglas J. Professor For & Envir Res Acad Research For & Envir Res Acad Research Chemistry Freedman,Leon D. **Emeritus Professor Grad Faculty** Chemistry Freeh, Vincent W Computer Science-engr **Grad Faculty** Computer Science-Engr Assoc Professor Freeman, Harold S. Named Professor Textile Engineering, Chemistry **Grad Faculty** Textile Engr Chemistry & Sci Freeman, Sharon Booth Adjunct Asst Professor Affiliate Grad Faculty Friday Institute TELS Affiliate Grad Faculty Freitag, Sandria B Teaching Assoc Professor History History Frey, Gregory E Adjunct Asst Professor For & Envir Res Acad Research Affiliate Grad Faculty For & Envir Res Acad Research Frey, Henry C Distinguished University Prof Civil Const & Environ Engineer **Grad Faculty** Civil, Const & Env Engineering Freytes PhD, Donald Osvaldo Grad Faculty Asst Professor Biomedical Program - ENG **Biomedical Program-Engineering** Friend,Craig T Professor History **Grad Faculty** History Physics Grad Faculty Physics Frohlich.Carla Assoc Professor Frohlich, Flavio Adjunct Assoc Professor Electrical & Computer Engr. Affiliate Grad Faculty Electrical & Computer Engr. Frye, Bobbie Jean Adjunct Asst Professor ELPHD Affiliate Grad Faculty ELPHD Grad Faculty Fuentes.Montserrat Statistics Grad & Temp Fuller,Frederick J. Professor Dept-Population, Health, Pathobi **Grad Faculty** Population Health&Pathobiology Fulp.Ronald O Professor Mathematics Grad Faculty Mathematics Emeritus Professor Fulp.Ronald O Mathematics Grad Faculty Mathematics Funkhouser PhD.Edward T. **Emeritus Associate Professor** Communication **Grad Faculty** Communication Fusarelli, Bonnie C ELPHD **Grad Faculty** ELPHD Professor ELPHD Grad Faculty ELPHD Fusarelli.Lance D. Professor Asst Professor **Grad Faculty** English Fyfe, Margaret Simon English Assoc Professor English Grad Faculty English Fyfe.Paul Camm Distinguished Professor Gabr.Mohammed Awad Civil Const & Environ Engineer **Grad Faculty** Civil, Const & Env Engineering Gadsby,John E. Professor Dept Molecular Biomedical Scie **Grad Faculty** Dept Molecular Biomedical Sci Galik,Christopher Assoc Professor Public & International Affairs **Grad Faculty** Public & International Affairs Gallagher, Victoria J Professor Communication **Grad Faculty** Communication Gallippi,Caterina M Asst Professor Biomedical Program - ENG Biomedical Program-Engineering **Grad Faculty** Biomedical Program - ENG Gamcsik Michael Assoc Professor **Grad Faculty** Biomedical Program-Engineering Gannon, Travis W Asst Professor Crop & Soil Sciences **Grad Faculty** Crop & Soil Sciences

Textile Engineering, Chemistry

Grad Faculty

Gao,Wei

Asst Professor

Textile Engr Chemistry & Sci

Garcia Ir Revnaldo R Garcia Menendez.Fernando Gardner Marian-Flizabeth B Gardner,Randolph G. Gardner, Robin Pierce Gardner, Sarah Y. Gardner Sarah Y Gardner, Terrence G Garland, Genevieve Marie Garland, Genevieve Marie Garlich, Jimmy Dale Garoutte, Dennis E. Garrett.Paul E Garrigan, Shelley E. Garson, George D Garval.Michael D Gasso, Santiago Gayles, Joy Gaston Gebreyes, Wondwossen A Gehringer,Edward F. Gellev.Ora Genereux, David Paul Genzer Jan Gerard Mathew P. Gerig, Thomas Michael Gerler Jr, Edwin R Gernat, Abel G. Getsinger,Kurt D Getzen.Forrest W Ghashghaei.Trov Ghiladi.Reza A Ghosh,Sujit K Ghosh, Tushar K. Ghoshal, Subhashis Gibson.James L Gilbert John H Gilger,Brian C Gill.Carolina Gillan PhD, Douglas John Gilleskie Gary Louis Gilliam PhD James Gilliam, James W. Gilligan, John G. Gilmartin, David P. Gilmour.Matthew Ian Gimeno Isabel M Ginn, George Warren Giraudel,Jerome M Glass Jr, Joseph Conrad Glisson Jr, Tildon H Godfrev.A. Blanton Godwin,John R Gold, Harvey J. Goldberg,Richard L Golden, Jacquelyn Beth Goldfarb.Barry Goldstein, Irving S. Goller, Carlos Christopher Golub,Robert Gomez, Joseph A Gomez, Shawn M.

Gonzalez, Liara M Gonzalez Ronalds Wilfredo Gonzalez-Sullivan,Leila Goode.Larry Richard Goodell,Lora Suzanne Goodman, Major M. Goodnight, James Howard Goodwin,Barry K Goodwin, Jean Elizabeth Gookin PhD,Jody L Gopalarathnam, Ashok Gordh.Gordon

Gordon PhD.Marsha Gabrielle Gordon, Tammrah S Gordy,Claire Lee Gorga, Russell E. Gorman, Christopher B Goshe.Michael B. Gosse.John Charles Gotwalt, Christopher M

Professor of the Practice Asst Professor Teaching Professor **Emeritus Professor** Professor

Emeritus Associate Professor Asst Professor Adjunct Assoc Professor Research Asst Professor Emeritus Professor Emeritus Associate Professor Adjunct Assoc Professor Assoc Professor Professor Adjunct Asst Professor Assoc Professor Assoc Professor Assoc Professor Assoc Professor

Professor Distinguished Professor Teaching Assoc Professor **Emeritus Professor** Professor Adjunct Asst Professor Adjunct Professor Emeritus Professor Assoc Professor Assoc Professor Professor Professor Assoc Professor Adjunct Professor Emeritus Associate Professor Professor Assoc Professor Professor Teaching Assoc Professor

Emeritus Named Distng'd Prof Distinguished University Prof Named Professor Adjunct Asst Professor Assoc Professor Teaching Asst Professor Adjunct Asst Professor **Emeritus Professor** Emeritus Professor Named Distinguished Univ Prof Professor

Emeritus Professor Research Assoc Professor Adjunct Professor Professor **Emeritus Professor** Teaching Asst Professor Professor Emeritus Professor Asst Professor Asst Professor Asst Professor Adjunct Professor

Adjunct Assoc Professor Assoc Professor Distinguished University Prof Adjunct Professor Named Distinguished Professor Professor Professor Professor

Professor Assoc Professor Teaching Asst Professor Professor Professor

Adjunct Professor

Assoc Professor Adjunct Assoc Professor Adjunct Asst Professor

ELPHD Civil Const & Environ Engineer Biological Sciences Horticultural Science Nuclear Engineering Dept of Clinical Sciences Dept of Clinical Sciences Crop & Soil Sciences Textile & Apparel, Technology Ofc Research, Innov & Econ Dev Prestage Poultry Science

Physics Foreign Languages And Literatu Public & International Affairs Foreign Languages And Literatu Marine, Earth And Atmospheric ELPHD Dept-Population,Health,Pathobi

Computer Science-engr English Marine, Earth And Atmospheric

Chemical & Biomolecular Engr Dept Molecular Biomedical Scie Statistics

ELPHD

Mathematics

Prestage Poultry Science Crop & Soil Sciences Chemistry

Dept Molecular Biomedical Scie Chemistry

Statistics

Textile Engineering, Chemistry Statistics

Horticultural Science Public & International Affairs **Dept of Clinical Sciences** Graphic & Industrial Design Psychology BTEC-Biomfg Training Ed Ctr

Biological Sciences Crop & Soil Sciences

College Of Engineering-dean's History Dept-Population.Health.Pathobi

Dent-Population Health Pathobi Graphic & Industrial Design Dept-Population, Health, Pathobi Adult & Higher Education Electrical & Computer Engr. Textile & Apparel, Technology **Biological Sciences**

Statistics Biomedical Program - ENG Prestage Poultry Science For & Envir Res Acad Research Forest Biomaterials **Biological Sciences** Physics

English Biomedical Program - ENG Dept of Clinical Sciences Forest Biomaterials Adult & Higher Education Civil Const & Environ Engineer Food, Bioprocess & Nutrition Sc

Crop & Soil Sciences Statistics

Ag & Resource Economics Communication Dept of Clinical Sciences Mechanical & Aerospace Engr Entomology & Plant Pathology English

History Biological Sciences Textile Engineering, Chemistry

Chemistry Riochemistry

Marine, Earth And Atmospheric Statistics

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ELPHD

Civil, Const & Env Engineering **Biological Sciences** Horticultural Science Nuclear Engr

Dept of Clinical Sciences

Soil Science

Textile & Apparel Tech & Mgmt Textile Engr Chemistry & Sci Prestage Poultry Science Mathematics Physics

Foreign Languages and Lit Public & International Affairs Foreign Languages and Lit Marine Earth & Atmospheric Sci

ELPHD

Population Health&Pathobiology Computer Science-Engr

English

Marine Earth & Atmospheric Sci Chemical & Biomolecular Engr. Dept of Clinical Sciences

Statistics ELPHD

Prestage Poultry Science Crop & Soil Sciences Chemistry

Dept Molecular Biomedical Sci Chemistry

Statistics

Textile Engr Chemistry & Sci

Statistics

Horticultural Science Public & International Affairs **Dept of Clinical Sciences** Graphic & Industrial Design

Psychology

Chemical & Biomolecular Engr.

Soil Science Nuclear Engr

Dept Microbiology Path & Para Population Health&Pathobiology Graphic & Industrial Design Population Health&Pathobiology Adult & Higher Education Electrical & Computer Engr. Textile & Apparel Tech & Mgmt

Biological Sciences

Statistics

Biomedical Program-Grad Appts Prestage Poultry Science For & Envir Res Acad Research Forest Biomaterials

Biological Sciences Physics English

Biomedical Program-Engineering **Dept of Clinical Sciences** Forest Biomaterials

ELPHD

Civil, Const & Env Engineering Food, Bioprocess & Nutrition Sc Crop & Soil Sciences

Statistics

Ag & Resource Economics Communication Dept of Clinical Sciences Mechanical & Aerospace Engr Entomology

English History **Biological Sciences**

Textile Engr Chemistry & Sci

Chemistry **Biochemistry**

Marine Earth & Atmospheric Sci

Statistics

Gould Christopher R Physics Grads & Temps Grad Faculty Grad Faculty Gould Fred I Named Distinguished Professor Entomology & Plant Pathology Entomology & Plant Pathology Gould Richard David Professor Mechanical & Aerospace Engr Grad Faculty Mechanical & Aerospace Engr Govoni, John Jeffrey Adjunct Professor Applied Ecology Affiliate Grad Faculty Applied Ecology Gower, Stith Thompson Professor For & Envir Res Acad Research Grad Faculty For & Envir Res Acad Research Professor Biological And Agricultural En Grad Faculty Biological And Agri Engr Grabow.Garry L Grace Landon Asst Professor Mechanical & Aerospace Engr Grad Faculty Mechanical & Aerospace Engr Research Assoc Professor Gracz, Hanna Biochemistry Grad Faculty Biochemistry Grady, Perry L. Emeritus Professor Textile Engineering, Chemistry Grad Faculty Textile Engr Chemistry & Sci Graham, Stephen Edward For & Envir Res Acad Research Affiliate Grad Faculty For & Envir Res Acad Research Lecturer Grainger, John J. Professo Electrical & Computer Engr. Grad Faculty Electrical & Computer Engr. Granlund,Kenneth Asst Professor Mechanical & Aerospace Engr Grad Faculty Mechanical & Aerospace Engr Grant Christine S Professor College Of Engineering-dean's Grad Faculty Chemical & Biomolecular Engr. Grant.Edward Professor Electrical & Computer Engr. Grad Faculty Electrical & Computer Engr. Grasso, Maureen Professor Textile & Apparel, Technology **Grad Faculty** Textile & Apparel Tech & Mgmt Graves, Alexandria K Assoc Professor Crop & Soil Sciences **Grad Faculty** Soil Science Gray, DeLeon L Asst Professor TELS Grad Faculty TELS Gray, Denis O. Psychology Psychology Grad Faculty Professor Emeritus Professor Psychology Psychology Grav.Denis O. Grad Faculty Gray, Joshua Michael Asst Professor For & Envir Res Acad Research **Grad Faculty** For & Envir Res Acad Research Adjunct Asst Professor Animal Science Affiliate Grad Faculty Grav.Kent A Animal Science Green Jr, James T **Emeritus Professor** Crop & Soil Sciences **Grad Faculty** Crop & Soil Sciences Green, David Patrick Food Bioprocess & Nutrition Sc. Grad Faculty Food Bioprocess & Nutrition Sc. Emeritus Professor Green.Matthew Piron Asst Professor Physics Grad Faculty Physics Greenberg, Cathryn Hoben Adjunct Professor For & Envir Res Acad Research Affiliate Grad Faculty For & Envir Res Acad Research Greene, Donna Gayle Adjunct Asst Professor ELPHD Affiliate Grad Faculty ELPHD Professor Public & International Affairs Grad Faculty Public & International Affairs Greene.Steven H Greenstein, Theodore Neuman Professor Sociology & Anthropology Grad Faculty Sociology & Anthropology Emeritus Professor For & Envir Res Acad Research Grad Faculty For & Envir Res Acad Research Gregory James D Gregory.Max E. Emeritus Professor Food, Bioprocess & Nutrition Sc Grad Faculty Food, Bioprocess & Nutrition Sc Gremaud,Pierre Alain Professor Mathematics **Grad Faculty** Mathematics Grennes, Thomas J. **Emeritus Professor** Economics-Poole COM **Grad Faculty** Economics-Poole COM Grieshop, Andrew P Asst Professor Civil Const & Environ Engineer **Grad Faculty** Civil, Const & Env Engineering Grifenhagen, Jill Freiberg Asst Professor TFIS Grad Faculty Elementary Education Adjunct Asst Professor Griffin Sr.Ervin Verome FIPHD Affiliate Grad Faculty FIPHD Public & International Affairs Public & International Affairs Griffin Clifford F Assoc Professor Grad Faculty Griffis, Dieter P. Research Assoc Professor Textile Engineering, Chemistry Affiliate Grad Faculty Materials Science & Engineering Griffith,Emily Hohmeister Research Asst Professor Grad Faculty Statistics Griggs, John Richard Teaching Assoc Professor Mathematics Affiliate Grad Faculty Mathematics Prestage Poultry Science Grad Faculty Prestage Poultry Science Grimes Jesse Lee Professor Assoc Professor FIPHD FIPHD Grimmett.Marc Anderson **Grad Faculty** Grimwood, James M. Professor English **Grad Faculty** English Dept-Population, Health, Pathobi Grindem, Carol B **Grad Faculty** Adult & Higher Education Grochowski, Colleen O'Connor Adjunct Asst Professor ELPHD Affiliate Grad Faculty Adjunct Asst Professor Grogan, Brandon Robert **Nuclear Engineering** Affiliate Grad Faculty Nuclear Engr Gross Charlotte Emeritus Professor Fnglish English Grad Faculty Gross, Harry D. **Emeritus Professor** Crop & Soil Sciences **Grad Faculty** Crop & Soil Sciences Gross, Kevin Professor Statistics **Grad Faculty** Statistics Foreign Languages And Literatu Grad Faculty Foreign Languages and Lit Gross, Ruth Vera Professor Grossfeld,Robert M. Emeritus Professor Applied Ecology Grad Faculty Applied Ecology Grove.Thurman L Emeritus Professor Applied Ecology **Grad Faculty** Applied Ecology Gruehn.Daniel Assoc Professor Psychology Grad Faculty Psychology Gruen, Margaret Elizabeth Asst Professor **Dept of Clinical Sciences Grad Faculty Dept of Clinical Sciences** Grunden, Amy Michele Named Professor Plant and Microbial Biology **Grad Faculty** Plant and Microbial Biology Gu,Xiaohui Assoc Professor Computer Science-engr **Grad Faculty** Computer Science-Engr Gu,Zhen Adjunct Assoc Professor Biomedical Program - ENG Biomedical Program-Engineering **Grad Faculty** Guarnieri.Charles Richard Materials Science & Engineering Affiliate Grad Faculty Gubbins, Keith E Named Distinguished Univ Prof Chemical & Biomolecular Engr **Grad Faculty** Chemical & Biomolecular Engr. Guddati, Murthy N. Professor Civil Const & Environ Engineer **Grad Faculty** Civil, Const & Env Engineering Adjunct Asst Professor Guinness.Joseph Statistics Grad & Temp **Grad Faculty** Statistics Guiteras, Raymond Patrick Asst Professor Ag & Resource Economics **Grad Faculty** Ag & Resource Economics Gulling, Dana Kathleen Assoc Professor Architecture Grad Faculty Architecture Gumpertz, Marcia Lynn Professor Statistics Grad Faculty Statistics Gundogdu,Kenan Assoc Professor Physics **Grad Faculty** Physics Grad Faculty Gunnoe.Thomas Brent Assoc Professor Chemistry Chemistry Gunter, Christopher Assoc Professor Horticultural Science **Grad Faculty** Horticultural Science Gupta.Abhinav Professor Civil Const & Environ Engineer Grad Faculty Civil, Const & Env Engineering Gupta, Ajaya K. Emeritus Professor Civil Const & Environ Engineer Grad Faculty Civil, Const & Env Engineering Gupta,Bhupender S **Emeritus Professor** Textile Engineering, Chemistry **Grad Faculty** Textile Engr Chemistry & Sci Gupta,Rachana Ashok Teaching Assoc Professor Electrical & Computer Engr. Affiliate Grad Faculty Electrical & Computer Engr. Gurgel, Patrick V Adjunct Asst Professor Affiliate Grad Faculty Chemical & Biomolecular Engr. Chemical & Biomolecular Engr Adjunct Asst Professor Affiliate Grad Faculty Gusmini, Gabriele Horticultural Science Horticultural Science Gustke.Larry Douglas Emeritus Associate Professor Parks, Recreation & Tourism Mg Grad Faculty Parks Recreation & Tourism Mg Gutierrez Rodriguez, Eduardo Asst Professor Food, Bioprocess & Nutrition Sc **Grad Faculty** Food, Bioprocess & Nutrition Sc Guvenc.Ismail Assoc Professor Electrical & Computer Engr. **Grad Faculty** Electrical & Computer Engr. Guy, James S. Professor Dept-Population, Health, Pathobi **Grad Faculty** Population Health&Pathobiology Gwyer,Janet Lynn Adjunct Professor ELPHD Affiliate Grad Faculty ELPHD Haase, David G. Professor **Physics Grad Faculty** Physics Adjunct Professor Applied Ecology Applied Ecology Haddad Nicholas M **Grad Faculty**

Sociology & Anthropology

Prestage Poultry Science

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Haenn.Nora M

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Assoc Professor

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Haider Mansoor Ahhas Professor Mathematics Grad Faculty Mathematics Haigler, Candace Hope Cron & Soil Sciences Grad Faculty Crop & Soil Sciences Professor Entomology & Plant Pathology Hain Fred P Emeritus Professor Grad Faculty Entomology Hakovirta, Marko Juhani Professor Forest Biomaterials **Grad Faculty** Forest Biomaterials Halberstadt,Amy gene Professor Psychology Grad Faculty Psychology Hale, Francis J. Emeritus Professor Mechanical & Aerospace Engr Grad Faculty Mechanical & Aerospace Engr Hale Scott A Professor Biological And Agricultural En Grad Faculty Riological And Agri Engr FIPHD FIPHD Haley, Richard L Emeritus Asst Professor Grad Faculty Hall Ir.Charles Edward Assoc Professor Mechanical & Aerospace Engr Grad Faculty Mechanical & Aerospace Engr Hall, Alastair R. Economics-Poole COM **Grad Faculty** Economics-Poole COM Professor Named Distinguished Univ Prof Hall Carol K Chemical & Biomolecular Engr Grad Faculty Chemical & Biomolecular Engr. Hall, George L. Emeritus Professor Grad Faculty Physics Physics Social Work Social Work Hall Iodi K Asst Professor Grad Faculty Hall Jonathan Russell Research Asst Professor **Biological Sciences** Affiliate Grad Faculty **Biological Sciences** Hall, Nathan Samuel Adjunct Asst Professor Marine, Earth And Atmospheric Affiliate Grad Faculty Marine Earth & Atmospheric Sci Hall.Steven George Assoc Professor Biological And Agricultural En **Grad Faculty** Biological And Agri Engr Hallen, Hans D Professor Physics Grad Faculty Physics Hallowell III.George Dewey Asst Professor of the Practice Architecture Affiliate Grad Faculty Architecture Teaching Asst Professor Biological Sciences Affiliate Grad Faculty Halweg, Christopher J Biological Sciences Graphic & Industrial Design Ham, Derek Allen Asst Professor **Grad Faculty** Graphic & Industrial Design Hamilton, Paul T Assoc Professor Plant and Microbial Biology Grad Faculty Plant and Microbial Biology Hamilton,Peter Adjunct Professor Marine, Earth And Atmospheric Affiliate Grad Faculty Marine Earth & Atmospheric Sci Hamilton, Steven Paul Adjunct Professor Mathematics Affiliate Grad Faculty Mathematics Materials Science & Engineering Hamme.John Valentine Emeritus Associate Professor Materials Science & Engineering Grad Faculty Hammerberg,Bruce Professor Dept-Population,Health,Pathobi **Grad Faculty** Population Health&Pathobiology Hammond, Robert Guthrie Assoc Professor Economics-Poole COM **Grad Faculty** Economics-Poole COM Hamon, Nicholas M Adjunct Professor Entomology & Plant Pathology Affiliate Grad Faculty Entomology Hamouda, Hechmi Teaching Professor Textile Engineering, Chemistry Grad Faculty Textile Engr Chemistry & Sci Civil, Const & Env Engineering Han.Kook Asst Professor Civil Const & Environ Engineer Grad Faculty Hanck, Kenneth W. Emeritus Professor Chemistry Grad Faculty Chemistry Named Distinguished Univ Prof Handfield.Robert B Business Management-Poole COM **Grad Faculty** Business Management-Poole COM Hanel, Rita M Adjunct Asst Professor **Dept of Clinical Sciences** Affiliate Grad Faculty **Dept of Clinical Sciences** Hanley-Bowdoin,Linda Kay Named Distinguished Professor Plant and Microbial Biology **Grad Faculty** Biochemistry Hanna, Adel F Adjunct Professor Marine, Earth And Atmospheric Affiliate Grad Faculty Marine Earth & Atmospheric Sci Emeritus Professor Grad Faculty Hansen.Arthur P Food, Bioprocess & Nutrition Sc Food, Bioprocess & Nutrition Sc Hansen Bernard Assoc Professor Dent of Clinical Sciences Grad Faculty Dept of Clinical Sciences Hansen, Jeffrey Alan Adjunct Professor Animal Science Affiliate Grad Faculty Animal Science Food, Bioprocess & Nutrition Sc Hanson, Dana J Assoc Professor Food, Bioprocess & Nutrition Sc Grad Faculty Hanson,John M Emrtus Distng'd Univ Prof Civil Const & Environ Engineer **Grad Faculty** Civil, Const & Env Engineering Harazin William Dennis Affiliate Grad Faculty Teaching Assoc Professor Textile & Annarel Technology Textile & Annarel Tech & Mgmt Hardie.Elizabeth Mills Professor Dept of Clinical Sciences **Grad Faculty** Dept of Clinical Sciences Hardin, Charles C. Assoc Professor Biochemistry **Grad Faculty** Biochemistry Plant and Microbial Biology **Grad Faculty** Plant and Microbial Biology Hardin, James W **Emeritus Professor** Hardison-Moody, Anne Margaret Asst Professor Agricultural & Human Sciences **Grad Faculty** Agricultural & Human Sciences Adjunct Asst Professor Affiliate Grad Faculty Crop & Soil Sciences Soil Science Hardy, David H Harfoush,Khaled Abdel Hamid Assoc Professor Computer Science-engr Grad Faculty Computer Science-Engr Harlim, John Adjunct Asst Professor Mathematics Affiliate Grad Faculty Mathematics Harmon, Deidre Danielle Extension Asst Professor Animal Science **Grad Faculty** Animal Science Affiliate Grad Faculty Harmon, Frank Cornelius Lecturer Horticultural Science Architecture Harmon, Russell S Adjunct Professor Marine, Earth And Atmospheric Affiliate Grad Faculty Marine Earth & Atmospheric Sci Harms.Craig A Professor Dept of Clinical Sciences **Grad Faculty** Dept of Clinical Sciences Harp,Tyler L Adjunct Asst Professor Entomology & Plant Pathology Affiliate Grad Faculty Entomology & Plant Pathology Harper, Craig Andrew Adjunct Assoc Professor For & Envir Res Acad Research Affiliate Grad Faculty For & Envir Res Acad Research Harper,James D Emeritus Professor Entomology & Plant Pathology **Grad Faculty** Entomology Harrell Jr,Cleon W **Emeritus Associate Professor** Economics-Poole COM **Grad Faculty** Economics-Poole COM Harrell,Robert J Adjunct Assoc Professor Animal Science Affiliate Grad Faculty Animal Science Harries, Peter Juergen Professor Graduate School-Dean's Office Grad Faculty Marine Earth & Atmospheric Sci Harrington, Ann D Teaching Assoc Professor TELS **Grad Faculty** TELS Harrington, Charles D Adjunct Assoc Professor Marine, Earth And Atmospheric Affiliate Grad Faculty Marine Earth & Atmospheric Sci Harris.Gabriel Keith Assoc Professo Food, Bioprocess & Nutrition Sc **Grad Faculty** Food, Bioprocess & Nutrition Sc Harris, William C. **Emeritus Professor** History **Grad Faculty** History Harrison Jr. William Charles ELPHD Affiliate Grad Faculty ELPHD Adjunct Asst Professor Harrison, Antony Howard Distinguished Professor English Grad Faculty English Harrison, Tara Myers Asst Professor **Dept of Clinical Sciences Grad Faculty Dept of Clinical Sciences** Harrysson, Ola Lars Anders Distinguished Professor Fitts Dept Indust & Syst Engr Grad Faculty Fitts Dept Indust & Syst Engr Hart.Franklin D. **Emeritus Professor** Ofc Research, Innov & Econ Dev **Grad Faculty** Mechanical & Aerospace Engr Hart.Peter Wayne Adjunct Assoc Professor Forest Biomaterials Affiliate Grad Faculty Forest Biomaterials Hartstone-Rose PhD.Adam Assoc Professor Biological Sciences Grad Faculty **Biological Sciences** Hartwig, Robert E. Professor Mathematics **Grad Faculty** Mathematics Harvey, Raymond W **Emeritus Professor Animal Science Grad Faculty Animal Science** Harwood, Karey Alison Assoc Professor Grad Faculty Philosophy & Religious Studies Philosophy & Religious Studies Haskett, Mary E Professor **Grad Faculty** Psychology Psychology Hassan.Awatif E Emeritus Professor For & Envir Res Acad Research Grad Faculty For & Envir Res Acad Research Mechanical & Aerospace Engr Hassan, Hassan A. **Emeritus Professor Grad Faculty** Mechanical & Aerospace Engr Hassan.Hosni Moustafa Professor Prestage Poultry Science **Grad Faculty** Microbiology Hassan, Tasnim Civil Const & Environ Engineer **Grad Faculty** Civil, Const & Env Engineering Professor Hatcher, Timothy G **Grad Faculty** Hathaway,Jon Michael Adjunct Asst Professor Biological And Agricultural En Affiliate Grad Faculty Biological And Agri Engr Hauck Marlene I Emeritus Professor Dept of Clinical Sciences **Grad Faculty** Dept of Clinical Sciences Hauenstein.Jonathan David Adjunct Asst Professor Mathematics Affiliate Grad Faculty Mathematics

Chemical & Biomolecular Engr

Grad Faculty

Chemical & Biomolecular Engr.

Professor

Haugh, Jason M

Hauser John R Hauser Peter I Hausladen Paul Andrew Havenstein, Gerald B. Havlin John L Havner, Kerry S. Hawari Avman I Hawkins, Eleanor C Hawkins, Mary Beth Hayes, Robert Bruce Haynie III, William J Hazel, Dennis W. He.Ruoving Headen, Alvin E. Healey, Christopher Graham Heatwole, Harold F Heber,Steffen Heck.Walter Webb Heckert.Andrew Bittinger Heckman, Sarah Smith Heese.Hans Sebastian Heggen-Peay, Cherilyn L Heimbach, Clinton L. Heiniger.Ronnie William Heise,Ryan J Heitman, Joshua L Heitmann Jr, John A Helman Lee Jav Helminck.Alovsius G Hemenway.Cynthia L Henard,David H Henderson, Karla Ann Henderson, Warren R. Hentz Jr.Forrest Clyde Hentz.Nathaniel G Herhert Ir David A Hergeth, Helmut H Hernandez,Raquel Hernandez,Ricardo Herring, William O Hersh.Patricia L Hersh, Solomon P. Hervey,Lisa Geralyn Hess, George R. Hess.Paul R Hess Thomas M Hessling, Peter A Hesterberg, Dean L Hestir, Erin Lee Hibbard, James Patrick Hicks.Gregory Eugene Hightower, Joseph E Hill, David Brian Hill,Jennifer Lee Hillmann, Ruediger C. Hineslev.Lewis E. Hinks.David Hinshaw, Jeffrey M. Hinton, Timothy J Hipp, James Aaron Hobbs,Heidi H Hobgood Jr, Thomas N Hodge, Gary Ray Hodge,George Lawrence Hodges,Charles S Hodgson,Ernest Hodgson, Thomas H. Hoefer, Mark Alan Hofelt, Christopher Scott Hoffmann PhD, Kristin Fisher Hoffmann PhD,Kristin Fisher Hoffmann,Mark Hoffmann.William A Hoggan, Chad David Hoit.Marc I Holder, Amara Lee Holl,Justin W Holland, James B

Hollar Seth F

Holley, Linda T.

Hollebrands, Karen Flanagan

Emeritus Named Professor Professor Adjunct Assoc Professor Emeritus Professor Professo Emeritus Professor Professor Professor Teaching Asst Professor Assoc Professor Emeritus Professor Assoc Professor Professor Emeritus Associate Professor Professor **Emeritus Professor** Assoc Professor Emeritus USDA Prof Adjunct Assoc Professor Teaching Assoc Professor Named Distinguished Professor Adjunct Asst Professor Emeritus Professor Professor Adjunct Asst Professor Professor Emeritus Professor Adjunct Professor Professor Professor Professor **Emeritus Professor Emeritus Professor** Emeritus Professor Adjunct Professor Assoc Professor Research Assoc Professor Asst Professor Adjunct Professor Professor **Emeritus Named Professor** Professor Assoc Professor Professor Teaching Asst Professor Named Professor Adjunct Asst Professor Emeritus Professor Teaching Asst Professor Adjunct Professor Professor Adjunct Asst Professor **Emeritus Associate Professor** Emeritus Professor Named Professor Professor Professor Assoc Professor Assoc Professor

Emeritus Professor Professor Assoc Professor Visiting Professor **Emeritus Professor** Emeritus Professor Adjunct Asst Professor Clinical Asst Professor

Lecturer Asst Professor Professor Asst Professor Professor Adjunct Asst Professor Adjunct Asst Professor **USDA Professor** Teaching Asst Professor Professor **Emeritus Professor**

Flectrical & Computer Engr Textile Engineering, Chemistry Nuclear Engineering Prestage Poultry Science Crop & Soil Sciences Civil Const & Environ Engineer Nuclear Engineering Dept of Clinical Sciences **Biological Sciences Nuclear Engineering** Sci, Tech, Engr & Math (STEM) Forestry Extension Marine, Earth And Atmospheric Economics-Poole COM Advanced Analytics Biological Sciences Computer Science-engr Administration - Research Serv Biological Sciences Computer Science-engi Business Management-Poole COM Prestage Poultry Science Civil Const & Environ Engineer Crop & Soil Sciences Applied Ecology Crop & Soil Sciences Forest Biomaterials Dept-Population, Health, Pathobi Mathematics Riochemistry Business Management-Poole COM Parks, Recreation & Tourism Mg Horticultural Science Chemistry BTEC-Biomfg Training Ed Ctr Entomology & Plant Pathology Textile & Apparel, Technology Biochemistry Horticultural Science Animal Science Mathematics Textile Engineering, Chemistry For & Envir Res Acad Research Dept of Clinical Sciences

Psychology ELPHD Crop & Soil Sciences Marine, Earth And Atmospheric Marine, Earth And Atmospheric ELPHD Applied Ecology Architecture ELPHD Entomology & Plant Pathology Horticultural Science College Of Textiles-dean's Off Applied Ecology Philosophy & Religious Studies Parks, Recreation & Tourism Mg Public & International Affairs Administration - Extension Ser CAMCORE-Cooperative Textile Engineering, Chemistry Entomology & Plant Pathology Applied Ecology Mechanical & Aerospace Engr Mathematics Applied Ecology TELS

TELS Horticultural Science Plant and Microbial Biology FIPHD VC for Off of Info Technology Marine, Earth And Atmospheric Animal Science Crop & Soil Sciences Electrical & Computer Engr. Sci, Tech, Engr & Math (STEM) English

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Flectrical & Computer Engr Textile Engr Chemistry & Sci Nuclear Engr Prestage Poultry Science Soil Science Civil, Const & Env Engineering Nuclear Engr **Dept of Clinical Sciences** Applied Ecology Nuclear Engr

Sci, Tech, Engr & Math (STEM) For & Envir Res Acad Research Marine Earth & Atmospheric Sci Economics-Poole COM Computer Science-Engr **Biological Sciences** Computer Science-Engr Plant and Microbial Biology Biological Sciences Computer Science-Engr Business Management-Poole COM Prestage Poultry Science Civil, Const & Env Engineering

Crop & Soil Sciences Applied Ecology Soil Science Forest Biomaterials Population Health&Pathobiology

Mathematics

Riochemistry

Business Management-Poole COM Parks Recreation & Tourism Mg Horticultural Science Chemistry

BTEC-Biomanuf Training Ed Ctr Entomology

Textile & Apparel Tech & Mgmt Biochemistry Horticultural Science Animal Science Mathematics Textile Engr Chemistry & Sci

Landscape Architecture Dept of Clinical Sciences

Psychology **ELPHD** Soil Science

Marine Earth & Atmospheric Sci Marine Earth & Atmospheric Sci ELPHD

Applied Ecology Architecture ELPHD Entomology Horticultural Science Textile Engr Chemistry & Sci

Applied Ecology Philosophy & Religious Studies Parks Recreation & Tourism Mg Public & International Affairs

Sociology And Anthropology For & Envir Res Acad Research Textile Engr Chemistry & Sci Entomology & Plant Pathology Toxicology Mechanical & Aerospace Engr

Mathematics

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Horticultural Science Plant and Microbial Biology

FIPHD

Civil, Const & Env Engineering Marine Earth & Atmospheric Sci Animal Science

Crop & Soil Sciences Mechanical & Aerospace Engr Sci, Tech, Engr & Math (STEM) English

Hollies H. Christian Holmes.Thomas P Holthausen.Duncan M. Holton, William C. Honevcutt.Thomas Lynn Hong.Hoon Hooker PhD.Deborah Small Hooker, Willard E. Hooper, Percy Rivera Hope,Elan Hopfenberg, Harold B. Hopkins, Brinton Alden Hopkins, Douglas C Hopkins, Thomas Sawyer Hoppin,Jane A Horie, Yasuyuki Horn, Timothy J Horne, Erin Thomas Horowitz, Jonathan M Horton, Horace R Hou.Jia Howard, Kristina Elaine Howell.Garv W Howell Gary W Howington, Stacy E. Hoyo,Cathrine Hren,John Joseph Hsiang,Simon M Hsiao, Chien Ching Lilian Hsieh.Tzung Fu Hu,Jianxin Hu,Shuijin Hu,Xiaogang Hu.Yongxiang Huang.He Huang, Hsiao-Ying Shadow Huang, Jeng Sheng Huang,Qin Hubbe, Martin A Hubbell Bryan I Hudson Lola Carol Hudson.Pevton B Hudson, Samuel Mack Huffman,Paul R Huffman.Rodnev L. Hughes Brian I Hughes, Claude L. Hughes-Oliver, Jacqueline M. Hulse,Amanda Marie Hunt III, William F Hunt Jr.Louis David Hunt, Heather Rose Shive Hunt, Jessica Heathe Hunt, Marvin W Hunte,Frank L. Huntington, Gerald B Hurley, Ryan J Husain, Igbal Huseth, Anders Schmidt Hyland, Ethan Gordon Hyman PhD, Michael Hyman, David N. Jafrate.Gerald J. liames Jr, John Shepherd Ingram.William G Intile DVM,Joanne Lynn Iorizzo.Massimo Insen.llse Irving, Douglas Lee Irwin,Rebecca Elizabeth Isaacson, Nathaniel Kenneth Isik,Fikret Isleib.Thomas G Ison.Elon Avinde Israel.Daniel Wesley

Istook,Cynthia L

Ivanisevic, Albena

Ivy,Julie Simmons

Ivanov Kostadin Nikolov

Ives.Robert Lawrence

Ito,Kazufumi

Professor Adjunct Professor Emeritus Professor Adjunct Professor Emeritus Associate Professor Professor

Emeritus Professor Assoc Professor Asst Professor

Emeritus Named Professor

Research Professor

Research Professor

Assoc Professor **Emeritus Professor** Research Asst Professor Clinical Asst Professor Professor Emeritus Named Distng'd Prof Research Asst Professor Research Asst Professor

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Granhic & Industrial Design For & Envir Res Acad Research Fronomics-Poole COM Electrical & Computer Engr. Computer Science-engr Mathematics English Horticultural Science Graphic & Industrial Design Psychology Chemical & Biomolecular Engr Animal Science Electrical & Computer Engr. Marine, Earth And Atmospheric **Biological Sciences** Civil Const & Environ Engineer Fitts Dept Indust & Syst Engr College Of Education Ofc Research, Innov & Econ Dev Biochemistry Nuclear Engineering Dept Molecular Biomedical Scie Advanced Computing Computer Science-engr Mathematics **Biological Sciences** Materials Science & Engineering Fitts Dept Indust & Syst Engr Chemical & Biomolecular Engr Plant and Microbial Biology Architecture Entomology & Plant Pathology Biomedical Program - ENG Marine, Earth And Atmospheric Biomedical Program - ENG Mechanical & Aerospace Engr Entomology & Plant Pathology Electrical & Computer Engr.

Ag & Resource Economics Dept Molecular Biomedical Scie Textile & Apparel, Technology Textile Engineering, Chemistry Physics Biological And Agricultural En Electrical & Computer Engr. Mathematics Statistics Crop & Soil Sciences Biological And Agricultural En EMAS-Enrollment Mgt & Services Dept-Population,Health,Pathobi TELS English Materials Science & Engineering Communication

Forest Biomaterials

Animal Science Electrical & Computer Engr. Entomology & Plant Pathology Marine, Earth And Atmospheric Plant and Microbial Biology Economics-Poole COM Electrical & Computer Engr. For & Envir Res Acad Research FIPHD Dept of Clinical Sciences Horticultural Science Mathematics Materials Science & Engineering Applied Ecology

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Textile & Apparel, Technology Mathematics Materials Science & Engineering **Nuclear Engineering**

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Granhic & Industrial Design For & Envir Res Acad Research Business Management-Poole COM Electrical & Computer Engr. Computer Science-Engr Mathematics

Horticultural Science Graphic & Industrial Design Psychology Chemical & Biomolecular Engr.

Electrical & Computer Engr. Marine Earth & Atmospheric Sci **Biological Sciences** Civil, Const & Env Engineering Fitts Dept Indust & Syst Engr TELS Dept Molecular Biomedical Sci Biochemistry Nuclear Engr

Dept Molecular Biomedical Sci

Computer Science-Engr Mathematics **Biological Sciences**

Materials Science & Engineering Fitts Dept Indust & Syst Engr Chemical & Biomolecular Engr.

Genetics Architecture

Entomology & Plant Pathology Biomedical Program-Engineering Marine Earth & Atmospheric Sci Biomedical Program-Engineering Mechanical & Aerospace Engr Entomology & Plant Pathology Electrical & Computer Engr. Forest Biomaterials

Ag & Resource Economics Dept Molecular Biomedical Sci Textile & Apparel Tech & Mgmt Textile Engr Chemistry & Sci Physics

Biological And Agri Engr Electrical & Computer Engr. Mathematics

Statistics Crop & Soil Sciences Biological And Agri Engr Adult & Higher Education Population Health&Pathobiology

TELS English

Materials Science & Engineering

Communication

Electrical & Computer Engr. Entomology & Plant Pathology Marine Earth & Atmospheric Sci Plant and Microbial Biology Economics-Poole COM Electrical & Computer Engr. For & Envir Res Acad Research

FIPHD

Dept of Clinical Sciences Horticultural Science Mathematics

Materials Science & Engineering Applied Ecology

Foreign Languages and Lit For & Envir Res Acad Research Crop & Soil Sciences

Chemistry Soil Science

Textile & Apparel Tech & Mgmt Mathematics

Materials Science & Engineering

Nuclear Engr Mathematics

Fitts Dept Indust & Syst Engr

Iver S. Purushothaman Adjunct Professor Computer Science-engr Affiliate Grad Faculty Computer Science-Engr Adjunct Asst Professor FIPHD Affiliate Grad Faculty Jackowski Melissa Bristle FIPHD Jackson Brian Fugene Assoc Professor Horticultural Science Grad Faculty Horticultural Science Jackson, Denis Sherald BTEC-Biomfg Training Ed Ctr Affiliate Grad Faculty Teaching Professor Jackson Steven D Integrated Manufacturing Sys E Grad Faculty Fitts Dept Indust & Syst Engr Jacob, Anna Margaret Asst Professor FIPHD Grad Faculty Dept-Population,Health,Pathobi Jacob.Megan E Assoc Professor Grad Faculty Population Health&Pathobiology FIPHD Jaeger, Audrey J. Professor FIPHD Grad Faculty Jahn, Larry G. Emeritus Professor Forest Biomaterials Grad Faculty Forest Biomaterials Jaimes, Hector A Foreign Languages And Literatu **Grad Faculty** Foreign Languages and Lit Professor Jakes,Susan S Extension Asst Professor Ag And Natural Resources/comm Grad Faculty Agricultural & Human Sciences Jakes,Susan S Extension Asst Professor Agricultural & Human Sciences Psychology **Grad Faculty** Jakuhikova Elena Assoc Professor Chemistry Grad Faculty Chemistry Jameel Hasan Named Professor Forest Biomaterials Grad Faculty Forest Biomaterials James, April Lynda Adjunct Assoc Professor For & Envir Res Acad Research Affiliate Grad Faculty For & Envir Res Acad Research Jameson, Jessica K **Grad Faculty** Communication Jang, Carey Adjunct Assoc Professor Marine, Earth And Atmospheric Affiliate Grad Faculty Marine Earth & Atmospheric Sci Distinguished Professor Civil, Const & Env Engineering Jaselskis, Edward J Civil Const & Environ Engineer Grad Faculty Grad Faculty Textile Engr Chemistry & Sci Jasper, Warren J Professor Textile Engineering, Chemistry Agricultural & Human Sciences Jayaratne, Koralalage Sunil Upali Assoc Professor **Grad Faculty** Agricultural & Extension Edu Named Professor Grad Faculty Food, Bioprocess & Nutrition Sc Javkus.Lee-Ann Food, Bioprocess & Nutrition Sc Jeffries, Micha Jennine Teaching Asst Professor **Grad Faculty Elementary Education** Asst Professor Statistics Grad Faculty Statistics Jeng, Xinge Jessie Jenkins David M. Emeritus Professor Personal Org. Development Grad Faculty Agricultural & Extension Edu Jennings, Gregory Donald Emeritus Professor Biological And Agricultural En **Grad Faculty** Biological And Agri Engr Jennings, Katherine Mary Assoc Professor Horticultural Science **Grad Faculty** Horticultural Science Tree Improvement Cooperative Grad Faculty For & Envir Res Acad Research Jett.Jackson Bates Professor Jett Jackson Bates Emeritus Professor College of Natural Resources Grad Faculty For & Envir Res Acad Research CAMCORE-Cooperative For & Envir Res Acad Research Jetton PhD.Robert Miller Research Assoc Professor Grad Faculty Ihala Arnay Harish Assoc Professor Computer Science-engr **Grad Faculty** Computer Science-Engr Ji,Chueng Ryong Professor Physics **Grad Faculty** Physics Jiang,Xiaoning Professor Mechanical & Aerospace Engr **Grad Faculty** Mechanical & Aerospace Engr Jiang,Xuxian Adjunct Assoc Professor Computer Science-engr Affiliate Grad Faculty Computer Science-Engr Jin,Bongil Assoc Professor Graphic & Industrial Design Grad Faculty Graphic & Industrial Design Computer Science-Engr **Grad Faculty** Jin.Guoliang Asst Professor Computer Science-engr Jing,Naihuan Professor Mathematics **Grad Faculty** Mathematics Jing,Yun Assoc Professor Mechanical & Aerospace Engr **Grad Faculty** Mechanical & Aerospace Engr Adjunct Assoc Professor Joffe,Sharon Lynne English Affiliate Grad Faculty English Johanningsmeier, Suzanne D USDA Asst Professor Food, Bioprocess & Nutrition Sc **Grad Faculty** Food, Bioprocess & Nutrition Sc Cron & Soil Sciences Grad Faculty Johnson Amy Marie Asst Professor Crop & Soil Sciences Professor of the Practice Johnson.Henry Louis FIPHD Affiliate Grad Faculty FIPHD Johnson, Jeremiah Assoc Professor Civil Const & Environ Engineer **Grad Faculty** Civil, Const & Env Engineering Johnson, Mark A Materials Science & Engineering **Grad Faculty** Johnson, Melissa A Professor Communication **Grad Faculty** Communication Emeritus Professor Mechanical & Aerospace Engr Johnson, Richard R. Mechanical & Aerospace Engr **Grad Faculty** Ag & Resource Economics Ag & Resource Economics Johnson Thomas Emeritus Professor Grad Faculty Johnson, William L **Emeritus Professor Animal Science Grad Faculty Animal Science** Asst Professor Johnston, Andrew Robert English **Grad Faculty** English Civil, Const & Env Engineering **Emeritus Distinguished Prof** Civil Const & Environ Engineer Grad Faculty Johnston, David West Emeritus Professor Grad Faculty Johnston, Karen L. Physics Physics Joijode, Abhay Sham Nonwovens Institute Affiliate Grad Faculty Textile Engr Chemistry & Sci Joijode, Abhay Sham Adjunct Professor Textile Engineering, Chemistry Affiliate Grad Faculty Joines, Jeffrey Allen Professor Textile Engineering, Chemistry **Grad Faculty** Textile Engr Chemistry & Sci Joines, Sharon Melissa Bennett Professor Graphic & Industrial Design **Grad Faculty** Graphic & Industrial Design Jones, Charles P. **Emeritus Named Professor** Business Management-Poole COM **Grad Faculty** Business Management-Poole COM Asst Professor Affiliate Grad Faculty Jones.Ebony Pearl History History Crop & Soil Sciences Crop & Soil Sciences Jones, Guy Langston Emeritus Professor Grad Faculty Jones, Jacob L Professor Materials Science & Engineering Grad Faculty Materials Science & Engineering Jones, James R. **Emeritus Professor** Animal Science **Grad Faculty Animal Science** Curr, Instr & Counselor Ed-CED Curr, Instr & Counselor Ed-CED Jones.Lawrence Keith **Emeritus Professor Grad Faculty** Jones, Melissa Gail Professor Sci, Tech, Engr & Math (STEM) **Grad Faculty** Sci, Tech, Engr & Math (STEM) Jones, Ronald K Emeritus Professor Entomology & Plant Pathology Grad Faculty Entomology & Plant Pathology Jones Samuel L Professor Dept of Clinical Sciences Grad Faculty Dept of Clinical Sciences Emeritus Professor Jones, Victor A. Food, Bioprocess & Nutrition Sc **Grad Faculty** Food, Bioprocess & Nutrition Sc Teaching Asst Professor Biological Sciences Affiliate Grad Faculty Jones.Whitney Mcrae **Biological Sciences** Jordan Jr,Edwin C College of Design Affiliate Grad Faculty Jordan, Chad Victor Teaching Assoc Professor Plant and Microbial Biology Grad Faculty Plant and Microbial Biology Grad Faculty Jordan David L Professor Crop & Soil Sciences Crop & Soil Sciences Iordan William I **Emeritus Professor** Communication **Grad Faculty** Communication Joyner, Charles Edward **Emeritus Professor** Art and Design **Grad Faculty** Art and Design Textile Engineering, Chemistry Grad Faculty Textile Engr Chemistry & Sci Jur.Jesse Stephen Assoc Professor Kaber, David B Fitts Dept Indust & Syst Engr **Grad Faculty** Population Health&Pathobiology Kaeser, Tobias Ernst Asst Professor Dept-Population.Health.Pathobi Grad Faculty Kahn, Joseph Stephan **Emeritus Professor** Biochemistry **Grad Faculty** Biochemistry Kalat.James W. Emeritus Professor Psychology **Grad Faculty** Psychology Kalinga,Owen J **Grad Faculty** Professor History History Kallestad, Waverly Anne Teaching Asst Professor For & Envir Res Acad Research **Grad Faculty** For & Envir Res Acad Research Economics-Poole COM Kalnina,Ilze Asst Professor Economics-Poole COM **Grad Faculty** Kaltofen,Erich L Professor Mathematics **Grad Faculty** Mathematics Kamper, Derek Gary Assoc Professor Biomedical Program - ENG **Grad Faculty** Biomedical Program-Engineering

Marine, Earth And Atmospheric

Grad Faculty

Kamykowski, Daniel

Emeritus Professor

Marine Earth & Atmospheric Sci

Kandilov Ivan Todorov Assoc Professor Ag & Resource Economics Grad Faculty Ag & Resource Economics Assoc Professor Grad Faculty Kang Min Jeong Mathematics Mathematics Parks Recreation & Tourism Mg Kanters Michael A Professor Parks, Recreation & Tourism Mg Grad Faculty Kaoumi,Djamel Assoc Professor **Nuclear Engineering Grad Faculty** Nuclear Engr Kapravelos, Alexandros Computer Science-engr Asst Professor Grad Faculty Computer Science-Engr Karoui, Abdennaceur Adjunct Assoc Professor Materials Science & Engineering Affiliate Grad Faculty Materials Science & Engineering Kasal Bohumil Adjunct Professor Forest Biomaterials Grad Faculty Forest Riomaterials Kasichainula, Jagannadham Assoc Professor Materials Science & Engineering Grad Faculty Materials Science & Engineering Kasper-Marienberg, Verena Ines Asst Professor History Grad Faculty History Kasworm, Carol Edith **Emeritus Named Professor** ELPHD **Grad Faculty** ELPHD Kathariou, Sophia Professor Food, Bioprocess & Nutrition Sc Grad Faculty Food, Bioprocess & Nutrition Sc Entomology & Plant Pathology Grad Faculty Katsumata.Avako Katti.Madhusudan Vithal Assoc Professor For & Envir Res Acad Research Grad Faculty For & Envir Res Acad Research Katz.Susan M Assoc Professor English Grad Faculty English Katzin, Gerald H. Emeritus Professor Physics **Grad Faculty** Physics Food, Bioprocess & Nutrition Sc Kay PhD,Colin David Assoc Professor Kannapolis Research **Grad Faculty** Kay, Michael G. Assoc Professor Fitts Dept Indust & Syst Engr Grad Faculty Fitts Dept Indust & Syst Engr Kays.Roland Wesley Research Assoc Professor For & Envir Res Acad Research For & Envir Res Acad Research Grad Faculty Research Asst Professor Grad Faculty Ke.Ruian Mathematics Mathematics Kearney, Richard Craig Public & International Affairs **Grad Faculty** Civil Const & Environ Engineer Grad Faculty Civil, Const & Env Engineering Kearns.Joshua Perry Asst Professor Kebschull, Harvey G. **Emeritus Associate Professor** Public & International Affairs **Grad Faculty** Public & International Affairs Kedrowicz.April Ann Asst Professor Dept of Clinical Sciences Grad Faculty Dept of Clinical Sciences Keene.Bruce W Professor Dept of Clinical Sciences Grad Faculty Dept of Clinical Sciences Keene.Karen Allen Assoc Professor Sci, Tech, Engr & Math (STEM) **Grad Faculty** Sci, Tech, Engr & Math (STEM) Kelley, Blair Lynne Murphy Assoc Professor Interdisciplinary Studies **Grad Faculty** History Kelley,Carl Timothy Named Professor Mathematics Grad Faculty Mathematics Kelley, John H Research Assoc Professor Physics Grad Faculty Physics Forest Biomaterials Kelley, Stephen S Forest Biomaterials Grad Faculty Professor Kellison Robert C Emeritus Professor For & Envir Res Acad Research **Grad Faculty** For & Envir Res Acad Research Kellner PhD.Hans Dodds Professor English **Grad Faculty** English Kellogg, Shaun B. Teaching Asst Professor Friday Institute Affiliate Grad Faculty TFIS Kelly, John Rivard **Emeritus Professor** Foreign Languages And Literatu **Grad Faculty** Foreign Languages and Lit Kelly,Robert M Named Professor Chemical & Biomolecular Engr Grad Faculty Chemical & Biomolecular Engr. Keltie,Richard F. Mechanical & Aerospace Engr **Grad Faculty** Mechanical & Aerospace Engr Professo Business Management-Poole COM Kemahlioglu-Ziva.Eda Assoc Professor Business Management-Poole COM **Grad Faculty** Kemper,Alexander Asst Professor Physics **Grad Faculty** Physics Applied Ecology Applied Ecology Kendall.Corinne J Adjunct Asst Professor Affiliate Grad Faculty Kennedy, George G. Named Distinguished Professor Entomology & Plant Pathology **Grad Faculty** Entomology & Plant Pathology Dept of Clinical Sciences Dept of Clinical Sciences Kennedy-Stoskonf Suzanne Grad Faculty Research Professor Affiliate Grad Faculty Kentgens-Craig PhD, Margret Adjunct Assoc Professor Architecture Architecture Kerns, James P Assoc Professor Entomology & Plant Pathology Grad Faculty Entomology & Plant Pathology Kertesz, Judy Asst Professor **Grad Faculty** History History Kessel, John J. Professor English **Grad Faculty** English Grad Faculty Kessel John J. **Emeritus Professor** English English Kessler Sanford H Emeritus Associate Professor Public & International Affairs Grad Faculty Public & International Affairs Keung, Albert Jun Qi Asst Professor Chemical & Biomolecular Engr **Grad Faculty** Chemical & Biomolecular Engr. Keys,Robert Dean **Emeritus Associate Professor** Crop & Soil Sciences **Grad Faculty** Crop & Soil Sciences Grad Faculty Communication Keyton, Joann Professor Communication Khachatoorian, Haig Emeritus Professor Graphic & Industrial Design Grad Faculty Graphic & Industrial Design Khaledi, Morteza Adjunct Professor Chemistry Affiliate Grad Faculty Chemistry Khaledi, Morteza **Emeritus Professor** Chemistry Affiliate Grad Faculty Chemistry Khan,Saad A Named Professor Chemical & Biomolecular Engr **Grad Faculty** Chemical & Biomolecular Engr. Khater, Akram F Professor KCLDS **Grad Faculty** History Kheyfets, Arkady Professor Mathematics **Grad Faculty** Mathematics Khisa, Moses Asst Professor Public & International Affairs Grad Faculty Public & International Affairs Grad Faculty Civil, Const & Env Engineering Khosla, Narendra P. Emeritus Professor Civil Const & Environ Engineer Kia.Behnam Adjunct Asst Professor Electrical & Computer Engr. Affiliate Grad Faculty Electrical & Computer Engr. Kia,Behnam Research Asst Professor Physics Affiliate Grad Faculty Physics Ag & Resource Economics Ag & Resource Economics Kick.Edward Lee Professo **Grad Faculty** Kilara, Arun Adjunct Professor Food, Bioprocess & Nutrition Sc Affiliate Grad Faculty Food, Bioprocess & Nutrition Sc For & Envir Res Acad Research Affiliate Grad Faculty For & Envir Res Acad Research Kilgo John C Adjunct Asst Professor Kim.Eui Kyung Asst Professor Psychology Grad Faculty Psychology Kim,Jihwan Research Asst Professor Electrical & Computer Engr. Affiliate Grad Faculty Electrical & Computer Engr. Kim,Ki Wook Electrical & Computer Engr. Grad Faculty Electrical & Computer Engr. Professo Kim,Mi Gyung Professor History **Grad Faculty** History Kim.Sung Woo Professor Animal Science Grad Faculty Animal Science Population Health&Pathobiology Adjunct Asst Professor Dept-Population,Health,Pathobi Affiliate Grad Faculty Kim, Yongbaek Kim, Youngsoo R Distinguished University Prof Civil Const & Environ Engineer **Grad Faculty** Civil, Const & Env Engineering Kimbell,Julia S Adjunct Asst Professor Statistics Affiliate Grad Faculty Statistics Kimler, William Charles Assoc Professor Grad Faculty History History Teaching Asst Professor Computer Science-engr Affiliate Grad Faculty Computer Science-Engr King, Jason Tyler King John S Professor FER Tree Physiology Grad Faculty For & Envir Res Acad Research **Emeritus Associate Professor** King, Margaret Fontaine English **Grad Faculty** English King, Martin William Professor Textile Engineering, Chemistry **Grad Faculty** Textile Engr Chemistry & Sci King, Russell E. Named Professor Fitts Dept Indust & Syst Engr **Grad Faculty** Fitts Dept Indust & Syst Engr King, Stacy W Distinguished Professor Business Management-Poole COM **Grad Faculty** Business Management-Poole COM Kingsmill, David E Adjunct Professor Marine, Earth And Atmospheric Affiliate Grad Faculty Marine Earth & Atmospheric Sci Kinsella William I Professor Communication **Grad Faculty** Communication Kirby, Barbara Malpiedi Professor Agricultural & Human Sciences **Grad Faculty** Agricultural & Human Sciences

Agricultural & Human Sciences

Grad Faculty

4-H Youth Dev & Fam & Cons Sci

Kirby,Sarah D

Professor

Kirkman Adrianna G College of Natural Resources Grad Faculty Professor Grad Faculty Mgmt Innovation & Entrepreneu Kirkman.Bradlev Lane Mgmt, Innovation&Entrepreneur Kirknatrick Gary Jay Adjunct Asst Professor Marine, Earth And Atmospheric Affiliate Grad Faculty Marine Earth & Atmospheric Sci Kiwanuka-Tondo, James Assoc Professor **Grad Faculty** Communication Communication Klaenhammer.Todd Robert Emrtus Nmd Distng'd Univ Prof Food, Bioprocess & Nutrition Sc Grad Faculty Food, Bioprocess & Nutrition Sc Mechanical & Aerospace Engr Grad Faculty Klang, Eric Carl Kleiman Glenn Marshall Professor Friday Institute Grad Faculty TFIS Klein.Katherine W. Emeritus Associate Professor Psychology Grad Faculty Psychology Kleiner, Manuel Asst Professor Plant and Microbial Biology Grad Faculty Plant and Microbial Biology Kleinstreuer,Clement Mechanical & Aerospace Engr **Grad Faculty** Mechanical & Aerospace Engr Professor Kleiss, Harold J. Emeritus Professor Crop & Soil Sciences Grad Faculty Kloos, Wesley Edwin Emeritus Professor Genetics **Biological Sciences Grad Faculty** Knappe,Detlef R Distinguished Professor Civil Const & Environ Engineer Grad Faculty Civil, Const & Env Engineering Knauer, Mark T Assoc Professor Animal Science **Grad Faculty** Animal Science Kneller, James P Assoc Professor Physics **Grad Faculty** Physics Economics-Poole COM Economics-Poole COM Knoeber, Charles Robert Professo **Grad Faculty** Knoll,Dana A. Adjunct Asst Professor Mathematics Affiliate Grad Faculty Mathematics Knollenberg, Whitney Grace Asst Professor Parks, Recreation & Tourism Mg Grad Faculty Parks Recreation & Tourism Mg Emeritus Professor Knowles Jr.A Sidney English Grad Faculty English Knowles, Charles Ernest Lecturer Mar, Earth & Atmos Sci Grad-Tm **Grad Faculty** Marine Earth & Atmospheric Sci Knowles, Charles Ernest Grad Faculty Lecture Marine, Earth And Atmospheric Marine Earth & Atmospheric Sci Teaching Asst Professor Knowles, James Robert English Affiliate Grad Faculty English Adjunct Assoc Professor For & Envir Res Acad Research Affiliate Grad Faculty For & Envir Res Acad Research Koch Jr. Frank H Materials Science & Engineering Koch, Carl C. Named Distinguished Professor Grad Faculty Materials Science & Engineering Koch, Joanna Greer Teaching Asst Professor TELS **Grad Faculty** TELS Koch,Steven E Adjunct Professor Marine, Earth And Atmospheric Affiliate Grad Faculty Marine Earth & Atmospheric Sci Kochersberger,Robert C. Grad Faculty Assoc Professor English English Kochersberger, Robert C. Emeritus Associate Professor English Grad Faculty English Public & International Affairs Public & International Affairs Kochtcheeva Lada Vvacheslavovna Grad Faculty Assoc Professor Koci Matthew D Assoc Professor Prestage Poultry Science Grad Faculty Prestage Poultry Science Kocurek.Michael J **Emeritus Professor** Forest Biomaterials **Grad Faculty** Forest Biomaterials Koenning PhD,Stephen Robert Emeritus Research Assoc Prof Entomology & Plant Pathology **Grad Faculty** Entomology & Plant Pathology Kogan,Irina Aleksandrovna Assoc Professor Mathematics **Grad Faculty** Mathematics Kolar, Praveen Assoc Professor Biological And Agricultural En Grad Faculty Biological And Agri Engr Kolb.John Ronald **Grad Faculty** Sci, Tech, Engr & Math (STEM) **Emeritus Professor** Sci, Tech, Engr & Math (STEM) Electrical & Computer Engr. Kolbas.Robert Michael Professor **Grad Faculty** Electrical & Computer Engr. Komarnytsky,Slavko Assoc Professor Kannapolis Research **Grad Faculty** Food, Bioprocess & Nutrition Sc Kon.Thomas Matthew Asst Professor Horticultural Science **Grad Faculty** Horticultural Science Konrad II, Charles Edward Adjunct Assoc Professor Marine, Earth And Atmospheric Affiliate Grad Faculty Marine Earth & Atmospheric Sci Konsler Thomas R Horticultural Science Grad Faculty Horticultural Science Emeritus Professor Dept-Population.Health.Pathobi Population Health&Pathobiology Kordick, Stephanie Adjunct Asst Professor Affiliate Grad Faculty Kornegay, Julia L Professor Horticultural Science **Grad Faculty** Horticultural Science Assoc Professor **Grad Faculty** Kosenko, Kama A Communication Communication Kosovic PhD,Branko Adjunct Assoc Professor Mar, Earth & Atmos Sci Grad-Tm Affiliate Grad Faculty Marine Earth & Atmospheric Sci Koster.Emlvn H Adjunct Professor Affiliate Grad Faculty Marine Earth & Atmospheric Sci Marine, Earth And Atmospheric Kotek Richard Assoc Professor Textile Engineering, Chemistry Grad Faculty Textile Engr Chemistry & Sci Kotter-Gruehn, Dana Psychology Affiliate Grad Faculty Kouri,Richard E Adjunct Professor Biomedical Program - ENG Affiliate Grad Faculty Biomedical Program-Engineering Affiliate Grad Faculty Koutsos, Elizabeth A Adjunct Professor **Animal Science Animal Science** Kowalsky, Mervyn J Civil Const & Environ Engineer Grad Faculty Civil, Const & Env Engineering Professor Kowolenko, Michael D. Adjunct Asst Professor Computer Science-engr Affiliate Grad Faculty Computer Science-Engr Krakowsky, Matthew David USDA Assoc Professor Crop & Soil Sciences **Grad Faculty** Crop & Soil Sciences Kramer, Jonathan Charles Teaching Professor Music Affiliate Grad Faculty Interdisciplinary Studies Kraus, Helen Tyler Assoc Professor Horticultural Science Horticultural Science **Grad Faculty** Kraus, Philip Allan Adjunct Assoc Professor **Nuclear Engineering** Affiliate Grad Faculty Nuclear Engr Krause, Wendy E. Assoc Professor Textile Engineering, Chemistry Textile Engr Chemistry & Sci **Grad Faculty** Accounting-Poole COM Krawczyk.Katherine Ann Professor Grad Faculty Accounting-Poole COM Kreitlow, Kimberly Lane Tabor Adjunct Asst Professor Entomology & Plant Pathology Affiliate Grad Faculty Entomology Krim, Hamid Professor Electrical & Computer Engr. **Grad Faculty** Electrical & Computer Engr. Krim.Jacqueline Professor Physics **Grad Faculty** Physics Krings, Alexander Assoc Professor Plant and Microbial Biology **Grad Faculty** Plant and Microbial Biology Business Management-Poole COM Krishnamurthy, Srinivasan Assoc Professor Business Management-Poole COM Grad Faculty Kropaczek, David Distinguished Professor Nuclear Engineering Grad Faculty Nuclear Engr Krotee, March Lee **Emeritus Professor** Health and Exercise Studies **Grad Faculty** Krute,Linda D College Of Engineering-dean's State Climate Office - AGNET Adjunct Asst Professor **Grad Faculty** Kudenov, Michael W Asst Professor Electrical & Computer Engr. **Grad Faculty** Electrical & Computer Engr. Kullman.Seth William Professor Biological Sciences Grad Faculty Biological Sciences Kumah, Divine Philip Asst Professor Grad Faculty Physics **Physics** Kunkel.Kenneth E Research Professor Marine, Earth And Atmospheric **Grad Faculty** Marine Earth & Atmospheric Sci Kuraparthy, Vasu Assoc Professor Crop & Soil Sciences **Grad Faculty** Crop & Soil Sciences Public & International Affairs Grad Faculty Public & International Affairs Kuzma.Jennifer Professor Kuznetsov, Andrey Valerevich Professor Mechanical & Aerospace Engr **Grad Faculty** Mechanical & Aerospace Engr USDI Professor Applied Ecology Kwak.Thomas J Grad Faculty Applied Ecology LaBean.Thomas H Professor Materials Science & Engineering **Grad Faculty** Materials Science & Engineering Labate,Demetrio Assoc Professor Mathematics **Grad Faculty** Mathematics Laber, Eric Benjamin Assoc Professor **Grad Faculty** Statistics Statistics Lackey, Carolyn Jean **Emeritus Professor** Agricultural & Human Sciences **Grad Faculty** Agricultural & Human Sciences Lackmann, Gary M. Professor Marine, Earth And Atmospheric **Grad Faculty** Marine Earth & Atmospheric Sci

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Lecturer

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Laffitte Bryan W Lahiri Soumendra Nath Lakin Kenneth R Lalush,David S Lamar.Traci Ann May Lamb.Harold Henry Lancia Richard Angelo Lane, Jeffrey William Laney,Reid W Lang PhD,Albert Joseph Langerhans, Randall Brian Langfelder, Leonard J. Langley,Ricky Lee Lanou, Randall S Lanzas, Cristina Laplante PhD.Caroline Lapp, John S. Lari.Pooneh Lari Pooneh Larick, Duane K. Larson, Lincoln Ray Lascelles, Duncan X. Lassiter.Charles A. Laster.Scott M. Lau, Christopher S Laux, Dorianne Louise Lavelle, Jerome Philip Lavopa, Anthony J. Law Jerry M Layman, Craig Anthony Lazzati.Davide Lazzi, Gianluca LeBeau, James Michael LeBlanc.Gerald Andre LeBlanc.Justin Douglas Edwards LePrevost.Catherine Elizabeth Leach, James Woodrow Lebude.Anthony V Leduc,Sharon K Lee PhD Kangiae Lee.Bongmook Lee,Dean Junyuel Lee, Dean Junyuel Lee, Hollylynne Stohl Lee.John Kelly Lee Joshua Alexander Lee, Nicole Marie Lee,Susanna M Lee, Yuan-Shin Leggett, Zakiya Holmes Leidv.Ross Bennett Leiter, Jeffrey Carl Leithold, Elana L. Lemaster,Richard L Leming, Michael Lloyd Leon Gonzalez,Ramon Gonzalo Leonard.Rebecca Leonas, Karen Lester II, James C Leung,Yu-Fai Levenbook,Barbara B. Levere.Thomas E. Levin.Harold D. Levine DVM,Jay Frederick Levine PhD, Norman Seth Levings III, Charles S Levis James William Levy.Michael G. Lewald.Carol Ann Lewbart, Gregory A Lewis,Ramsey S Lewis, William M. Lewitus.Alan J Ley, David H. Li.Bailian Li,Fanxing Li,Jun Li,Lexin Li,Lingjuan Wang Li.Xu

Li,Zheng

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Granhic & Industrial Design Statistics Entomology & Plant Pathology Biomedical Program - ENG Textile & Apparel, Technology Chemical & Biomolecular Engr For & Envir Res Acad Research **Nuclear Engineering** Applied Ecology For & Envir Res Acad Research Biological Sciences Marine, Earth And Atmospheric Biological Sciences Architecture Dept-Population, Health, Pathobi Dept Molecular Biomedical Scie Economics-Poole COM ELPHD FIPHD Exec Vice Chancellor & Provost Parks, Recreation & Tourism Mg **Dept of Clinical Sciences** Animal Science Biological Sciences Dept Molecular Biomedical Scie College Of Engineering-dean's History Dept-Population, Health, Pathobi Applied Ecology Physics Electrical & Computer Engr. Materials Science & Engineering **Biological Sciences** Art and Design Applied Ecology Mechanical & Aerospace Engr Horticultural Science Marine, Earth And Atmospheric Parks Recreation & Tourism Mg Adv Self-pwr Sys Integr SensrT Physics Physics Sci, Tech, Engr & Math (STEM) TELS Crop & Soil Sciences Communication History Fitts Dept Indust & Syst Engr For & Envir Res Acad Research **Biological Sciences** Sociology & Anthropology Marine, Earth And Atmospheric Forest Biomaterials Civil Const & Environ Engineer Crop & Soil Sciences Communication Textile & Apparel, Technology Computer Science-engr Parks, Recreation & Tourism Mg Philosophy & Religious Studies Psychology Philosophy & Religious Studies Marine, Earth And Atmospheric Marine, Earth And Atmospheric **Biological Sciences** Civil Const & Environ Engineer Dept-Population, Health, Pathobi Interdisciplinary Studies **Dept of Clinical Sciences** Crop & Soil Sciences Crop & Soil Sciences Marine, Earth And Atmospheric Dept-Population, Health, Pathobi Office of Global Engagement Chemical & Biomolecular Engr Nuclear Engineering

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Marine Earth & Atmospheric Sci

Population Health&Pathobiology

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Chemical & Biomolecular Engr.

Biological And Agri Engr

Plant and Microbial Biology

Ag & Resource Economics

Sociology & Anthropology

Dept of Clinical Sciences

Crop & Soil Sciences

Crop & Soil Sciences

Nuclear Engr

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Biomedical Program-Engineering

Statistics

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Luginbuhl, James E.

Luginbuhl, Jean-Marie

Professor Asst Professor Asst Professor Asst Professor Adjunct Professor Named Distinguished Professor Adjunct Assoc Professor Distinguished Professor Emeritus Associate Professor **Emeritus Associate Professor** Emeritus Associate Professor Professor Asst Professor Adjunct Assoc Professor Asst Professor Professor

Clinical Professor Teaching Assoc Professor Asst Professor

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Named Distinguished Professor **Emeritus Professor** Assoc Professor Asst Professor Assoc Professor Adjunct Asst Professor Adjunct Asst Professor Assoc Professor Professor Adjunct Asst Professor Professor Assoc Profess of the Practice Research Professor **Emeritus Professor** Adjunct Assoc Professor Assoc Professor Professo Research Assoc Professor Teaching Assoc Professor Research Professor Professor Asst Professor Emeritus Professor Assoc Professor Research Asst Professor **Emeritus Distinguished Prof** Adjunct Assoc Professor Asst Professor Emeritus Professor **Emeritus Professor**

Emeritus Professor

Mathematics Public & International Affairs Sociology & Anthropology Mathematics Crop & Soil Sciences Biomedical Program - ENG Plant and Microbial Biology Kannapolis Research Sociology & Anthropology Sociology And Anthropology Crop & Soil Sciences Chemical & Biomolecular Engr Physics Marine, Earth And Atmospheric Electrical & Computer Engr. Biomedical Program - ENG Mathematics Crop & Soil Sciences Dept-Population.Health.Pathohi Parks, Recreation & Tourism Mg Chemistry Accounting-Poole COM Chemistry Crop & Soil Sciences Dept of Clinical Sciences Civil Const & Environ Engineer Textile & Apparel, Technology Graphic & Industrial Design Electrical & Computer Engr. Marine, Earth And Atmospheric Animal Science Mar, Earth & Atmos Sci Grad-Tm Marine, Earth And Atmospheric Mechanical & Aerospace Engr Civil Const & Environ Engineer Mathematics Graphic & Industrial Design Horticultural Science Operations Research-engr Cron & Soil Sciences Prestage Poultry Science Mathematics Administration - Extension Ser Electrical & Computer Engr. Materials Science & Engineering Cron & Soil Sciences Agricultural & Human Sciences

Chemistry **ELPHD** Plant and Microbial Biology Administration - Research Serv Crop & Soil Sciences Plant and Microbial Biology **Grad Faculty Physics** Sociology & Anthropology **Grad Faculty** Dept of Clinical Sciences Affiliate Grad Faculty Affiliate Grad Faculty Entomology & Plant Pathology Entomology & Plant Pathology **Grad Faculty** Biological And Agricultural En **Grad Faculty** Civil Const & Environ Engineer Affiliate Grad Faculty Integrated Pest Mgmt-Research **Grad Faculty** Grad Faculty Art and Design College of Sciences - Dean Affiliate Grad Faculty Graphic & Industrial Design **Grad Faculty** For & Envir Res Acad Research Affiliate Grad Faculty Electrical & Computer Engr. **Grad Faculty** Statistics Grad Faculty Physics Affiliate Grad Faculty **Biological Sciences Grad Faculty** FREEDM Center **Grad Faculty** Grad Faculty Mathematics

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Forest Biomaterials
Civil Const & Environ Engineer
Physics
Marine, Earth And Atmospheric
Dept-Population,Health,Pathobi
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Crop & Soil Sciences

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Entomology & Plant Pathology Plant and Microbial Biology **Physics** Sociology & Anthropology Dept of Clinical Sciences Entomology & Plant Pathology Entomology & Plant Pathology Biological And Agri Engr Civil, Const & Env Engineering Entomology & Plant Pathology Art and Design College of Sciences-Dean's Off Graphic & Industrial Design For & Envir Res Acad Research Electrical & Computer Engr. Statistics Physics **Biological Sciences** Electrical & Computer Engr. Mathematics Dept Molecular Biomedical Sci Entomology & Plant Pathology Forest Biomaterials Civil, Const & Env Engineering **Physics** Marine Earth & Atmospheric Sci Population Health&Pathobiology Microbiology

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Crop & Soil Sciences

Lukic Srdian Mindrag Assoc Professor Flectrical & Computer Engr Grad Faculty Flectrical & Computer Engr Grad Faculty Lunardi.Leda Professor Flectrical & Computer Engr Electrical & Computer Engr. Lunn.David Paul Professor College Of Veterinary Medicine Grad Faculty Dept of Clinical Sciences Lunn, Katharine Fiona Assoc Professor **Dept of Clinical Sciences Grad Faculty Dept of Clinical Sciences** Luo,Hong Professor Mechanical & Aerospace Engr Grad Faculty Mechanical & Aerospace Engr Lupton-Smith, Helen S Teaching Asst Professor FIPHD Grad Faculty FIPHD Luria.Keith Phillip Professor History Grad Faculty History Dept of Clinical Sciences Assoc Professor Lyle.Sara K **Dept of Clinical Sciences** Grad Faculty Lynch PhD.Collin Francis Asst Professor Computer Science-engr Grad Faculty Computer Science-Engr Lynch, Alex Michael Asst Professor **Dept of Clinical Sciences Grad Faculty Dept of Clinical Sciences** Lyons, Kevin M Professor Mechanical & Aerospace Engr Grad Faculty Mechanical & Aerospace Engr Mabrito, Robert Alan Assoc Professor Philosophy & Religious Studies Philosophy & Religious Studies **Grad Faculty** MacKay,Trudy F. Adjunct Professor Biological Sciences Grad Faculty Biological Sciences MacKethan, Lucinda H. **Emeritus Professor** English Grad Faculty English MacNair, Douglas J Adjunct Asst Professor Ag & Resource Economics Affiliate Grad Faculty Ag & Resource Economics Macdonald.Jeffrev M Assoc Professo Biomedical Program - ENG **Grad Faculty** Biomedical Program-Engineering Machado, Gustavo Asst Professor Dept-Population,Health,Pathobi Grad Faculty Population Health&Pathobiology Microbiology Mackenzie Jr.John M Grad Faculty Professor Biochemistry Assoc Professor Landscape Architecture Magallanes, Fernando H. Landscape Architecture Grad Faculty Maggard Jr, Paul Anthony Assoc Professor Chemistry **Grad Faculty** Chemistry Research Assoc Professor Dept of Clinical Sciences Affiliate Grad Faculty Dept of Clinical Sciences Maggi.Ricardo G Maguire, Rory O Adjunct Asst Professor Prestage Poultry Science Affiliate Grad Faculty Prestage Poultry Science Mahaffey, James W. Biological Sciences Grad Faculty Biological Sciences Professor Adjunct Asst Professor Affiliate Grad Faculty Mahdi.Adam Mathematics Mathematics Maher, Michael J Adjunct Asst Professor College Of Education **Grad Faculty** TFIS Mahinthakumar, Gnanamanikam Professor Civil Const & Environ Engineer **Grad Faculty** Civil, Const & Env Engineering Adjunct Asst Professor Marine, Earth And Atmospheric Affiliate Grad Faculty Marine Earth & Atmospheric Sci Mahoney, Kelly M Main, Charles E. Emeritus Professor Entomology & Plant Pathology Grad Faculty Entomology & Plant Pathology Mainland, Charles Michael Emeritus Professor Horticultural Science Grad Faculty Horticultural Science Maity.Arnab Assoc Professor Statistics **Grad Faculty** Statistics Malarkey, David E Adjunct Asst Professor Dept-Population, Health, Pathobi Affiliate Grad Faculty Population Health&Pathobiology Malecha, Marvin J **Emeritus Professor** College of Design **Grad Faculty** Architecture Mallette,Bruce Ingram Adjunct Assoc Professor ELPHD Affiliate Grad Faculty Adult & Higher Education Maltecca.Christian Assoc Professor Animal Science Grad Faculty Animal Science Grad Faculty Manfra.Meghan McGlinn TELS Assoc Professor TFIS Mannshardt Flizabeth Catherine Adjunct Asst Professor Statistics Affiliate Grad Faculty Statistics Mansmann, Richard A. Clinical Professor **Dept of Clinical Sciences** Affiliate Grad Faculty **Dept of Clinical Sciences** Manukian, Vahagn Emil Adjunct Professor Mathematics Affiliate Grad Faculty Mathematics Manzoni,Anna Assoc Professor Sociology & Anthropology **Grad Faculty** Sociology & Anthropology Marcellin Denis I Dent of Clinical Sciences Grad Faculty Marchant Montenegro, Hernan Pedro **Grad Faculty** Art and Design Professor Art and Design Marchi PhD, Dudley Michael Professor Foreign Languages And Literatu **Grad Faculty** Foreign Languages and Lit Economics-Poole COM **Grad Faculty** Margolis, Stephen E Margolis, Stephen E. **Emeritus Professor** Economics-Poole COM **Grad Faculty** Economics-Poole COM Foreign Languages And Literatu Mari.Jorge **Grad Faculty** Foreign Languages and Lit Professor Maria Ion-Paul Materials Science & Engineering Grad Faculty Maria, Jon-Paul **Emeritus Professor** Materials Science & Engineering **Grad Faculty** Materials Science & Engineering Mariani, Christopher L. Assoc Professor Dept of Clinical Sciences **Grad Faculty** Dept of Clinical Sciences Business Management-Poole COM Mgmt, Innovation&Entrepreneur Markham, Stephen K Professor **Grad Faculty** Marks,Steven L Clinical Professor College Of Veterinary Medicine Affiliate Grad Faculty Dept of Clinical Sciences Marlin.Joe A. **Emeritus Professor** Mathematics **Grad Faculty** Mathematics Marra, Michele C **Emeritus Professor** Ag & Resource Economics Grad Faculty Ag & Resource Economics Marsden, Kurt Asst Professor **Biological Sciences Grad Faculty Biological Sciences** Marshall, David S. USDA Professor Entomology & Plant Pathology **Grad Faculty** Entomology & Plant Pathology Marshall, Patricia L Professo **Grad Faculty** Martens, Christopher Robin Asst Professor Computer Science-engr Grad Faculty Computer Science-Engr Martin Jr.Robert H Professor Mathematics Grad Faculty Mathematics Emeritus Professor Martin, David W Psychology **Grad Faculty** Psychology Martin, Donald Eugene Kemp Assoc Professor Statistics **Grad Faculty** Statistics Martin, Elijah H Adjunct Assoc Professor **Nuclear Engineering** Affiliate Grad Faculty Nuclear Engr Martin, James D Professor Chemistry **Grad Faculty** Chemistry For & Envir Res Acad Research Martin.Katherine Lee Asst Professor For & Envir Res Acad Research Grad Faculty Martin, Linda Dintaman Chemistry Grad Faculty Dept Molecular Biomedical Sci Martin,Linda Dintaman Urban Affairs & Community Serv **Grad Faculty** Professor Grad Faculty Fitts Dept Indust & Syst Engr Martin.Louis A College Of Engineering-dean's Martin,Ryan Glenn Assoc Professor **Grad Faculty** Martinez Pelsor PhD.Marilyn N Adjunct Professor Dept-Population.Health.Pathobi Affiliate Grad Faculty Population Health&Pathobiology Asst Professor Agricultural & Human Sciences Grad Faculty Agricultural & Human Sciences Maslow, Lindsey Haynes Mason.Jennifer Elizabeth Adjunct Asst Professor Fitts Dept Indust & Syst Engr Affiliate Grad Faculty Fitts Dept Indust & Syst Engr Massad,Jordan E Mathematics Adjunct Asst Professor Affiliate Grad Faculty Mathematics Mastromauro, Michael Louis Clinical Asst Professor Dept of Clinical Sciences Affiliate Grad Faculty Dept of Clinical Sciences Affiliate Grad Faculty Mathaudhu, Suveen Nigel Adjunct Asst Professor Materials Science & Engineering Materials Science & Engineering Teaching Assoc Professor Affiliate Grad Faculty Mathews.Gary Lynn Foreign Languages And Literatu Foreign Languages and Lit Mathews, Kyle G Professor Dept of Clinical Sciences **Grad Faculty** Dept of Clinical Sciences Mathur.Kavita Adjunct Professor Textile & Apparel, Technology Affiliate Grad Faculty Textile & Apparel Tech & Mgmt Teaching Asst Professor Sci, Tech, Engr & Math (STEM) Affiliate Grad Faculty Sci, Tech, Engr & Math (STEM) Matthews, Brian Matthews, Daniel W **Emeritus Associate Professor** Agricultural & Human Sciences **Grad Faculty** Agricultural & Human Sciences Matthews, Delisia Raychelle Asst Professor Textile & Apparel, Technology **Grad Faculty** Textile & Apparel Tech & Mgmt Matthews.Jessica Loock NC Inst of Climate Studies Affiliate Grad Faculty

Mathematics

Biological Sciences

Affiliate Grad Faculty

Grad Faculty

Mathematics

Biological Sciences

Matthews.Jessica Loock

Mattingly, Carolyn Jane

Adjunct Asst Professor

Assoc Professor

Mattingly John Kelly Matzen. Vernon C. Matzinger Dale F Maultsby, Bevin Laurel Maxa.Edward L. Maxwell, Earl S. Maxwell Mildred Gordon May May, Leila S Mayer,Roger C Mayhorn, Christopher Brooke Mayorga, Maria Esther Maze.Benoit Maze.Benoit Mazzoleni.Andre P McAllister, David Franklin McCall.Patricia Lou McCarter, James B McCarty.Gregory S McClelland, Jacquelyn W. McConnell.David A McCord, Marian G McCorkle, Jill Collins McCraw.Roger Lee McCreery, John K McDermed.Elizabeth A. McDonald, Bruce McDonald.Steven J McEachin PhD, Andrew Josef McElroy, Michael B. McFeeters,Roger Floyd McGahan, Mary C. McGavern, Dorian Brice McGill, Alicia Ebbitt McGill,Dru Evan McGinnis Michelle S McGowan PhD Kristie Lee McGowan,Herle M McGraw.Darryl Dana McGraw,Lisa Anne McInnis William Dale McKeand.Steven Edward McKee,Katherine Elizabeth McKenzie, Wendell Herbert McKeown,Julia O'Neal McKerrow.Alexa J McKinney Thearon T McLaughlin, Anne Collins McLaughlin, Gail C. McLaughlin,Levi McLaughlin, Richard A McMahon.Gerard McManus, Shea Connolly McMillan III, William Owen McMillan III, William Owen McMullen Jr, Richard J. McNeal,Karen Sue McNinch, Jesse E. McNulty,Steven George McRae, David S. McRae.Gail G. McTague, John Paul Mcginley, Kathleen Ann Meade.Adam W Mechem, David B Medhin.Negash G Meeker PhD,Rick B. Meentemever.Ross Kendall Megalos, Mark Arthur Mehlenbacher, Bradley S Meiklejohn, Kelly Ann Meilleur.Flora Meitzen, John Edward Mell Julie L Mellen Charron.Katherine Melton III.Thomas A Menegatti, Stefano Meng,John Menzies, Timothy James Mera.Roberto Javier Meric.Ilker

Merrill, Melissa Schuster

Assoc Professor Emeritus Professor Emeritus Professor Teaching Asst Professor Emeritus Associate Professor Professo Adjunct Asst Professor Professor Professor Professor Professor Research Asst Professor Research Asst Professor Assoc Professor **Emeritus Professor** Teaching Assoc Professor Research Assoc Professor Emeritus Professor Professor Professor Professor of the Practice Emeritus Professor Emeritus Associate Professor Emeritus Associate Professor Assoc Professor Professor Adjunct Asst Professor Emeritus Associate Professor Emeritus USDA Prof Professor Adjunct Professor Asst Professor Asst Professor Adjunct Professor Professor of the Practice Teaching Assoc Professor Adjunct Asst Professor Asst Professor Adjunct Asst Professor Professor Asst Professor **Emeritus Professor** Teaching Asst Professor Adjunct Asst Professor Emeritus Professor Assoc Professor Professo Asst Professor Professor Adjunct Professor Asst Professor Adjunct Assoc Professor Adjunct Assoc Professor Adjunct Asst Professor USDA Professor

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Biochemistry

History

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Biological Sciences

Ag And Natural Resources/comm

Chemical & Biomolecular Engr

Textile & Apparel, Technology

Marine, Earth And Atmospheric

Computer Science-engr

Nuclear Engineering

Animal Science

Nuclear Engineering Civil Const & Environ Engineer Biological Sciences Mathematics Agricultural & Human Sciences Biochemistry ELPHD English Mgmt, Innovation&Entrepreneur Psychology Fitts Dept Indust & Syst Engr Nonwovens Institute Textile Engineering, Chemistry Mechanical & Aerospace Engr Computer Science-engr Sociology & Anthropology For & Envir Res Acad Research Chemistry Agricultural & Human Sciences Marine, Earth And Atmospheric College of Natural Resources English Animal Science Business Management-Poole COM Business Management-Poole COM Public & International Affairs Sociology & Anthropology ELPHD Economics-Poole COM Food, Bioprocess & Nutrition Sc College of Sciences - Dean Dept-Population, Health, Pathobi History Sociology & Anthropology Horticultural Science MBA Program-Poole COM Statistics ELPHD **Biological Sciences** FIPHD Tree Improvement Cooperative Agricultural & Human Sciences **Biological Sciences** Applied Ecology Agricultural & Human Sciences Psychology Physics Philosophy & Religious Studies Crop & Soil Sciences Applied Ecology Sociology & Anthropology **Biological Sciences** Genetics **Dept of Clinical Sciences** Marine, Earth And Atmospheric Marine, Earth And Atmospheric For & Envir Res Acad Research Mechanical & Aerospace Engr Crop & Soil Sciences For & Envir Res Acad Research For & Envir Res Acad Research Psychology Marine, Earth And Atmospheric Dept Molecular Biomedical Scie Ctr. for Geospatial Analytics Forestry Extension FIPHD Dept-Population, Health, Pathobi

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Marine Earth & Atmospheric Sci. For & Envir Res Acad Research Mechanical & Aerospace Engr Crop & Soil Sciences For & Envir Res Acad Research For & Envir Res Acad Research Psychology Marine Earth & Atmospheric Sci Mathematics Dept Molecular Biomedical Sci For & Envir Res Acad Research For & Envir Res Acad Research FIPHD Population Health&Pathobiology Biochemistry **Biological Sciences** History History Entomology & Plant Pathology Chemical & Biomolecular Engr. Textile & Apparel Tech & Mgmt Computer Science-Engr Marine Earth & Atmospheric Sci Nuclear Engr Animal Science

Mershon Donald H Mertz John P Meskhidze Nicholas Messenger, Kristen Michele Messura.Mark Alan Meurs, Kathryn Montgome Meuten Donald I Meyer Ir.Carl Meyer, John R. Meyers, Walter E. Mian,Rouf M Michael, Joan J Michielsen.Stephen Michnowicz James Casimir Mickle James E. Middleton.Teena F Mielke, Jeffrey Ingle Mikail.Raiib Milheim.William Dryden Milholland, Robert D. Milla-Lewis, Susana Rita Millar, Joseph H Miller III.Thomas Kenan Miller.Carolyn Rae Miller, Eric S. Miller, Grady L. Miller, Victoria Mayne Miller,W J Miller, William Laubach Millhauser.John K Mills.Luther Scott Minogue,James Minter Jr, Larry J Miranda, Lilian Mia Mishra I.Santosh Kumar Misra.Kailash Chandra Misra, Veena Mitas, Lubos Mitasova, Helena Mitchell Anne W Mitchell.Gary E. Mitchell, Karlyn Mitchell, Philip H Mitchell,Roger Emmit Mitchell.Rolanda Levica Mitin.Dmitri Moazed, Khosrow L. Mock, Gary N. Mody,Sujata Sudhakar Moeser, Adam James Mohamed.Mansour H. Mohiti Asli Mahsa Mojica, Gemma Foust Mokhtari, Amirhossein Monaco, Malina K. Monaco.Thomas J. Monaco.Thomas J. Monahan, John F. Moneta, Larry Money, Eric Shane Monks, David W. Monteiro-Riviere, Nancy A Montgomery, Terry G Montgomery, Terry G Montova.Brina Mortensen Moog,Robert S. Moore Jr. Harry B Moore Sr.Charles Lee Moore.Catherine E. Moore, Gary E. Moore.Jeannette A Moore, Kathryn M. Moore, Marguerite Murray Moore, Robin C. Moore,Roger Louis Moore, Samuel Bascom Moore,Susan Elizabeth Moorman,Christopher E Morais Duarte B Morant, Tamah Chesney

Moreland, Charles G.

Emeritus Professor Assoc Professor Professor Asst Professor Adjunct Assoc Professor Professor Emeritus Professor **Emeritus Professor** Professor **Emeritus Professor** USDA Professor Emeritus Professor Professor Assoc Professor Professor Adjunct Asst Professor Assoc Professor Adjunct Asst Professor Adjunct Asst Professor **Emeritus Professor** Assoc Professor Asst Professor of the Practice Distinguished Professor **Emeritus Professor** Professor Professor Asst Professor Professor Emeritus Professor Asst Professor Adjunct Professor Assoc Professor Adjunct Asst Professor Adjunct Asst Professor Asst Professor Professor Distinguished Professor Professo Professor Professor Emeritus Professor Assoc Professor Assoc Professor **Emeritus Associate Professor** Teaching Asst Professor Teaching Asst Professor **Emeritus Professor Emeritus Professor** Assoc Professor Adjunct Assoc Professor Emeritus Distinguished Prof Adjunct Asst Professor Adjunct Asst Professor Adjunct Asst Professor Emeritus Professor Emeritus Professor **Emeritus Professor** Adjunct Asst Professor Teaching Asst Professor Professor **Emeritus Professor** Adjunct Assoc Professor Adjunct Assoc Professor Asst Professor Assoc Professor Emeritus Professor **Emeritus Professor**

Emeritus Associate Professor **Emeritus Professor** Professor Professor Professor Emeritus Associate Professor Adjunct Assoc Professor Professor Assoc Professor

Teaching Professor

Emeritus Professor

English

Animal Science

College Of Education

Landscape Architecture

Poole COM-Acad Affairs

Agricultural & Human Sciences

Textile & Apparel, Technology

Textile & Apparel, Technology

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Psychology Grad Faculty Foreign Languages And Literatu Grad Faculty Marine, Earth And Atmospheric Grad Faculty Dept Molecular Biomedical Scie **Grad Faculty** Textile & Apparel, Technology Affiliate Grad Faculty College Of Veterinary Medicine Grad Faculty Dent-Population Health Pathobi Grad Faculty Grad Faculty Mathematics Entomology & Plant Pathology Grad Faculty **Grad Faculty** English Crop & Soil Sciences Affiliate Grad Faculty Grad Faculty Psychology Textile Engineering, Chemistry Grad Faculty Foreign Languages And Literatu Grad Faculty Plant and Microbial Biology **Grad Faculty** Prestage Poultry Science Affiliate Grad Faculty English Grad Faculty Electrical & Computer Engr. Affiliate Grad Faculty FIPHD Affiliate Grad Faculty Entomology & Plant Pathology **Grad Faculty** Crop & Soil Sciences Grad Faculty English Affiliate Grad Faculty DELTA Grad Faculty English Grad Faculty Plant and Microbial Biology **Grad Faculty** Crop & Soil Sciences **Grad Faculty** Materials Science & Engineering Grad Faculty English Grad Faculty Biochemistry Grad Faculty Sociology & Anthropology **Grad Faculty** For & Envir Res Acad Research Affiliate Grad Faculty TELS **Grad Faculty Dept of Clinical Sciences** Affiliate Grad Faculty Crop & Soil Sciences Affiliate Grad Faculty Dept Molecular Biomedical Scie Grad Faculty Mathematics Grad Faculty Electrical & Computer Engr. **Grad Faculty** Physics Grad Faculty Marine, Earth And Atmospheric **Grad Faculty** History Grad Faculty Physics **Grad Faculty** Business Management-Poole COM **Grad Faculty** Forest Biomaterials **Grad Faculty** Psychology **Grad Faculty** Affiliate Grad Faculty ELPHD Public & International Affairs Grad Faculty Materials Science & Engineering **Grad Faculty** Textile Engineering, Chemistry **Grad Faculty** Grad Faculty Foreign Languages And Literatu Dept-Population, Health, Pathobi Grad Faculty Textile Engineering, Chemistry **Grad Faculty** Biomedical Program - ENG Affiliate Grad Faculty Friday Institute Affiliate Grad Faculty Mathematics College Of Education Administration - Research Serv Horticultural Science Statistics **ELPHD** Ctr. for Geospatial Analytics Administration - Research Serv Dept of Clinical Sciences Textile & Apparel, Technology Textile Engineering, Chemistry Civil Const & Environ Engineer Public & International Affairs Entomology & Plant Pathology Ag & Resource Economics

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Biomedical Program-Engineering Mathematics ELPHD Horticultural Science Horticultural Science Statistics Adult & Higher Education For & Envir Res Acad Research Horticultural Science Dept of Clinical Sciences Textile Engr Chemistry & Sci Textile Engr Chemistry & Sci Civil, Const & Env Engineering Public & International Affairs Entomology Ag & Resource Economics English Agricultural & Human Sciences Animal Science

Parks Recreation & Tourism Mg Textile & Apparel Tech & Mgmt For & Envir Res Acad Research

Textile & Apparel Tech & Mgmt

Landscape Architecture

Parks Recreation & Tourism Mg Economics-Poole COM Ofc Research, Innov & Econ Dev Morgado Patricia F Assoc Professor Architecture Grad Faculty Architecture Morgan.Paul H Statistics Affiliate Grad Faculty Statistics Adjunct Professor Morillo John D Assoc Professor **English** Grad Faculty **English** Morrill, Melinda Sandler Assoc Professor Economics-Poole COM **Grad Faculty** Economics-Poole COM Morrill, Thayer Stephen Assoc Professor Economics-Poole COM Grad Faculty Economics-Poole COM Morris Jr, James Adiel Adjunct Asst Professor Applied Ecology Affiliate Grad Faculty Applied Ecology Morrison John M Adjunct Professor Marine, Earth And Atmospheric Affiliate Grad Faculty Marine Farth & Atmospheric Sci FIPHD FIPHD Morrissey, Sharon E Adjunct Asst Professor Affiliate Grad Faculty Morrow.William M Emeritus Professor Animal Science Grad Faculty Animal Science Motsinger-Reif, Alison Anne Assoc Professor Statistics **Grad Faculty** Statistics Mott, Bradford Wayne Adjunct Asst Professor Computer Science-engr Affiliate Grad Faculty Computer Science-Engr Mouat Croxatto, Cecilia Asst Professor Art and Design Grad Faculty Art and Design Mowat, Freya Margarete Asst Professor Dept of Clinical Sciences Grad Faculty Dent of Clinical Sciences Moxley, Robert Lonnie Emeritus Professor Sociology And Anthropology Grad Faculty Sociology And Anthropology Moyer,James W. 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Oralkan,Omer Professor Electrical & Computer Engr. **Grad Faculty** Orders, Amy Buchanan Adjunct Asst Professor Environmental Health & Safety Affiliate Grad Faculty ELPHD Orgeron PhD Devin A Assoc Professor Fnglish English Grad Faculty Textile Engr Chemistry & Sci Ormond, Robert B Research Asst Professor Thermal Protection & Comfort C **Grad Faculty** Orndorff,Paul E. **Emeritus Professor** Dept-Population, Health, Pathobi **Grad Faculty** Population Health&Pathobiology Entomology & Plant Pathology Entomology & Plant Pathology Assoc Professor Grad Faculty Orr, David B Orr,Miriam E Professor English Grad Faculty English Civil, Const & Env Engineering Ortiz, Aleiandra Campbell Asst Professor Civil Const & Environ Engineer **Grad Faculty** Osborne, Jason A. 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Professor Oviedo-Rondon Edgar Orlando Professor Prestage Poultry Science Grad Faculty Prestage Poultry Science Owen Jr, James Stetter Adjunct Assoc Professor Horticultural Science Affiliate Grad Faculty Horticultural Science Named Professor Textile Engineering, Chemistry Grad Faculty Textile Engr Chemistry & Sci Oxenham.William Fitts Dept Indust & Syst Engr Ozaltin,Osman Yalin Asst Professor **Grad Faculty** Fitts Dept Indust & Syst Engr Ozturk.Hatice Orun Teaching Assoc Professor Biomedical Program - ENG Affiliate Grad Faculty Electrical & Computer Engr. Ozturk.Mehmet Cevdet Electrical & Computer Engr. Grad Faculty Electrical & Computer Engr. 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Painter.Jason L

Painter, Jason L

Pal,Lokendra

Affiliate Grad Faculty

Affiliate Grad Faculty

Grad Faculty

The Science House-COS

Forest Biomaterials

TELS

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Palmouist Raymond B Emeritus Professor Fronomics-Poole COM Grad Faculty Fronomics-Poole COM Palmtag.Scott Parker Nuclear Grad & Temp Affiliate Grad Faculty Pancorho Jennifer BTEC-Biomfg Training Ed Ctr Affiliate Grad Faculty BTEC-Biomanuf Training Ed Ctr Assoc Professor Pang,Tao Mathematics **Grad Faculty** Mathematics Pankow, Mark R Asst Professor Mechanical & Aerospace Engr Grad Faculty Mechanical & Aerospace Engr Panthee, Dilip Raj Assoc Professor Horticultural Science Grad Faculty Horticultural Science Pan Chia Ven Emeritus Professor Mathematics Grad Faculty Mathematics Papich, Mark G Professor Dept Molecular Biomedical Scie Grad Faculty Dept Molecular Biomedical Sci. 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FIPHD Grad Faculty FIPHD Pasque.Penny Ann Professor Pasquinelli Melissa Professor Textile Engineering, Chemistry Grad Faculty Textile Engr Chemistry & Sci Pasten, Jose Agustin Professor Foreign Languages And Literatu **Grad Faculty** Foreign Languages and Lit Patala.Srikanth Asst Professor Materials Science & Engineering Grad Faculty Materials Science & Engineering Patisaul, Heather B. Named Professor **Biological Sciences Grad Faculty Biological Sciences** Patrick Jason Fredrick Civil Const & Environ Engineer Grad Faculty Civil, Const & Env Engineering Asst Professor Crop & Soil Sciences Grad Faculty Patterson.Robert P. Professor Crop & Soil Sciences Patty.Richard R. Emeritus Professor Physics **Grad Faculty** Physics Paulette, Tate Sewell History **Grad Faculty** History Asst Professor Paur,Sandra **Emeritus Associate Professor** Mathematics **Grad Faculty** Mathematics Electrical & Computer Engr. Affiliate Grad Faculty Electrical & Computer Engr. Pavlidis.Spyridon Asst Professor Pawlak Inel Justin Assoc Professor Forest Biomaterials Grad Faculty Forest Biomaterials Pawlowski, Roger P. Adjunct Professor Mathematics Affiliate Grad Faculty Mathematics Payne,Gary A Emeritus Named Distng'd Prof Entomology & Plant Pathology **Grad Faculty** Entomology & Plant Pathology Business Management-Poole COM Grad Faculty Business Management-Poole COM Payton, Fay C Professor Peace,Robert Lynn Emeritus Professor Accounting-Poole COM Grad Faculty Accounting-Poole COM Peacock, Charles H. Professor Crop & Soil Sciences **Grad Faculty** Crop & Soil Sciences Pearce, Douglas K. Professor Economics-Poole COM Grad Faculty Economics-Poole COM Pearson, Jamie Nicole Asst Professor TELS **Grad Faculty** TELS Pearson, Richard G. **Emeritus Professor** Fitts Dept Indust & Syst Engr **Grad Faculty** Fitts Dept Indust & Syst Engr Pearson, Richard G. **Emeritus Professor** Psychology **Grad Faculty** Fitts Dept Indust & Syst Engr Pearson, Ronald G. 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Affiliate Grad Faculty

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DELTA

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Professor Animal Science **Grad Faculty** Animal Science Petty,lan T Professor DELTA Grad Faculty **Biological Sciences** Philbrick,C Russell Research Professor Marine, Earth And Atmospheric Grad Faculty Marine Earth & Atmospheric Sci Phillins Richard Bushee Adjunct Professor Forest Biomaterials Affiliate Grad Faculty Forest Riomaterials Phillips.Shannon Elizabeth Assoc Professor Animal Science **Grad Faculty** Animal Science Phillips.Sharon Bake Adjunct Asst Professor Marine, Earth And Atmospheric Affiliate Grad Faculty Marine Earth & Atmospheric Sci Picart, Jose' A Professor ELPHD **Grad Faculty** ELPHD Pickworth, Carrie L Asst Professor Animal Science Grad Faculty Animal Science Piedrahita, Jorge A Professor Dept Molecular Biomedical Scie Grad Faculty Dept Molecular Biomedical Sci Emeritus Professor Pierce.Christine M. Philosophy & Religious Studies Grad Faculty Philosophy & Religious Studies Pierce, Joshua Glenn Asst Professor Chemistry Grad Faculty Chemistry Pierce,Marcela Assoc Professor Plant and Microbial Biology **Grad Faculty** Plant and Microbial Biology Pierson Julie Ann Paula Student Health Services Affiliate Grad Faculty Pierson, Julie Ann Paula Adjunct Assoc Professor **Biological Sciences** Affiliate Grad Faculty **Biological Sciences** Marine, Earth And Atmospheric Pietrafesa.Leonard J. Emeritus Professor Grad Faculty Marine Earth & Atmospheric Sci Asst Professor Grad Faculty English Pigg.Stacev L English Ag & Resource Economics Piggott, Nicholas E Professor **Grad Faculty** Ag & Resource Economics Pilkington, Dwain H Emeritus Professor Food, Bioprocess & Nutrition Sc Grad Faculty Food, Bioprocess & Nutrition Sc Pillsbury, Harold C Professor Biomedical Program - ENG **Grad Faculty** Biomedical Program-Engineering Biomedical Program - ENG Biomedical Program-Engineering Pinton.Gianmarco Francesco Asst Professor Grad Faculty Place.Wayne Professor Architecture Grad Faculty Architecture Planchart, Antonio J Asst Professor **Biological Sciences Grad Faculty Biological Sciences** Plume, Vita Karina **Emeritus Associate Professor** Art and Design Grad Faculty Art and Design Emeritus Associate Professor Business Management-Poole COM Business Management-Poole COM Poindexter Jr, Julius C **Grad Faculty** Poling.Edward B. Emeritus Professor Horticultural Science Grad Faculty Horticultural Science Polizzotto.Matthew I Adjunct Assoc Professor Crop & Soil Sciences Crop & Soil Sciences Grad Faculty Pollack.Jeffrev M Assoc Professor Mgmt, Innovation&Entrepreneur Grad Faculty Mgmt, Innovation & Entrepreneu Pollock.Kenneth Hugh **Emeritus Professor** Applied Ecology **Grad Faculty** Applied Ecology Polyak,Emil Asst Professor Art and Design **Grad Faculty** Art and Design Pond III,Samuel B. Assoc Professor Psychology **Grad Faculty** Psychology Poole, Daniel Heath Assoc Professor Animal Science Grad Faculty Animal Science Animal Science Grad Faculty Poore.Matt H Professor Animal Science Pone Carol A Emeritus Professor TELS Grad Faculty TFIS Porter,Stephen Robert Professor ELPHD **Grad Faculty** ELPHD Textile & Apparel Tech & Mgmt Porterfield Jane Anne Asst Professor Textile & Apparel, Technology Grad Faculty Posner,Lysa Pam Professor Dept Molecular Biomedical Scie **Grad Faculty** Dept Molecular Biomedical Sci Asst Professor Cron & Soil Sciences Grad Faculty Cron & Soil Sciences Post.Angela Rose Teaching Asst Professor Affiliate Grad Faculty Post.Justin Blaise Statistics Statistics Potter,Kevin M Research Assoc Professor For & Envir Res Acad Research **Grad Faculty** For & Envir Res Acad Research Pour-Ghaz, Mohammad Civil Const & Environ Engineer **Grad Faculty** Civil, Const & Env Engineering Assoc Professo Named Distinguished Professor Pourdeyhimi,Behnam College Of Textiles-dean's Off **Grad Faculty** Textile Engr Chemistry & Sci Grad Faculty Powell Jr.Merle A **Emeritus Professor** Horticultural Science Horticultural Science Powell Nancy C Emeritus Professor Textile & Apparel, Technology Grad Faculty Textile & Apparel Tech & Mgmt Powell, Nathaniel T. **Emeritus Named Professor** Entomology & Plant Pathology **Grad Faculty** Entomology & Plant Pathology Powell,Roger A. **Emeritus Professor** Applied Ecology **Grad Faculty** Applied Ecology Prak,Anco L. **Emeritus Named Professor** Fitts Dept Indust & Syst Engr Fitts Dept Indust & Syst Engr **Grad Faculty** Prater, John T. Materials Science & Engineering Affiliate Grad Faculty Prater John T. Adjunct Professor Materials Science & Engineering Affiliate Grad Faculty Materials Science & Engineering Prestemon, Jeffrey P Affiliate Grad Faculty Adjunct Professor For & Envir Res Acad Research For & Envir Res Acad Research Presutti, David G Teaching Asst Professor Biochemistry Affiliate Grad Faculty Biochemistry Prioli,Carmine A. **Emeritus Professor** English **Grad Faculty** Pritchard, Ruie J. **Emeritus Professor** TELS **Grad Faculty** TELS Proctor, Charles H. Emeritus Professor Statistics Grad Faculty Statistics Grad Faculty Proulx.Caroline Asst Professor Chemistry Chemistry Puckett, Brandon Joel Adjunct Asst Professor Marine, Earth And Atmospheric Affiliate Grad Faculty Marine Earth & Atmospheric Sci Puckett, Paige Rollins Biological And Agricultural En Affiliate Grad Faculty Biological And Agri Engr Puckett,Paige Rollins Adjunct Asst Professor Biological And Agricultural En Affiliate Grad Faculty Purnell, Marshall E. Professor of the Practice Architecture **Grad Faculty** Architecture For & Envir Res Acad Research Affiliate Grad Faculty For & Envir Res Acad Research Purnell.Robert C Adjunct Professor Purrington.Suzanne Townsend Emeritus Professor Chemistry Grad Faculty Chemistry Puryear,Bobby Lee **Emeritus Teaching Professor** Economics-Poole COM Affiliate Grad Faculty Economics-Poole COM Grad Faculty Philosophy & Religious Studies Purvear.Stephen Montague Assoc Professor Philosophy & Religious Studies Putcha, Mohan Sastri **Emeritus Professor** Mathematics **Grad Faculty** Mathematics Ou.Rongda Professor Crop & Soil Sciences Grad Faculty Crop & Soil Sciences Assoc Professor Queen, Sara Glee Grad Faculty Architecture Architecture Entomology & Plant Pathology Quesada PhD.Lina Maria Asst Professor **Grad Faculty** Entomology & Plant Pathology Quesenberry, Charles P. **Emeritus Professor Grad Faculty** Statistics Statistics Dept of Clinical Sciences Affiliate Grad Faculty Dept of Clinical Sciences Qurollo.Barbara Alice Research Asst Professor Mechanical & Aerospace Engr **Grad Faculty** Mechanical & Aerospace Engr Rabiei, Afsaneh Professor Teaching Asst Professor Affiliate Grad Faculty Race.Shaina L Advanced Analytics Mathematics Rahman, M. Shamimur Professor Civil Const & Environ Engineer **Grad Faculty** Civil, Const & Env Engineering Raiala.Sarah Ann Emeritus Professor College Of Engineering-dean's **Grad Faculty** Electrical & Computer Engr. Ralls, Robert Scott Adjunct Professor ELPHD Affiliate Grad Faculty Adult & Higher Education Raman,Sethu **Emeritus Professor** Marine, Earth And Atmospheric **Grad Faculty** Marine Earth & Atmospheric Sci Ramsey, J. Michael Professor Biomedical Program - ENG Biomedical Program-Engineering

Architecture

Business Management-Poole COM

Civil Const & Environ Engineer

Rand I Patrick

Rand.William Michael

Ranjithan, Sanmugavadivel

Professor

Professor

Asst Professor

Grad Faculty

Grad Faculty

Grad Faculty

Grad Faculty

Architecture

Business Management-Poole COM

Civil, Const & Env Engineering

Ranney Thomas G Rao Balaii M Rao S Trivikrama Rappa, Michael A Rasdorf, William John Rawlings, John Oren Ray Tracey F Raymond, Dana Gordon Reading, Benjamin J Reading, Nathan P Reardon, Robert John Reaser, Jeffrey Leo Reaves.Bradley Galloway Reavis, Dick J Rebach,Steve Reberg-Horton, Samuel Christopher Redding,W Rich Reed.Robert E Reeves Baley Akemi Reeves, Douglas Stephen Reeves, Gregory T Reich, Brian J Reichard Donald L. Reid, Jeffrey Clinton Reid Traciel V Reif, David Michael Reiland, Thomas W. Reisig, Dominic Duane Reiskind, Martha Burford Reiskind, Michael Hav Reiesus.Roderick M. Renkow, Mitchell Adam Reyhanoglu, Mahmut Reynolds Jr, Claude Lewis Revnolds.Kanton Tyrone Reynolds Peter I Reynolds, Stephen P. Rhee,Injong Rice, Arthur R Rice James A Rich, Samantha Anne Rozier Richardson, Kevin Andrew Richardson, Robert Jeryl Ricketts, David Riddick,Francine Piscitelli Riddle John M Rider, Traci Rose Ridgeway, Don L. Rieder PhD, David M Rieder, Kathleen Callahan Riehn.Robert Rifki.Fatih A. Riitters, Kurt H Rindos III, Andrew J Rindos III.Andrew J Riordan, Allen J. Rissman, Emilie Francesca Ristaino, Jean B. Ritchie, David F. Rittling, Mary Elizabeth Rivers, Anthony T Rivers,Louie Riviere Jim E. Rizkalla,Sami Ro.Paul I Robarge, Wayne P. Roberson, Gary T Roberts IV.William L Roberts.David L Roberts, John F Roberts, Malcolm C. Roberts, Reade Bruce Roberts.Stephen Dean Robertson, Dominique Robertson, Ian Douglas Robertson, Robert L. Robins, Nicholas A

Robinson Jr, Mendel L

Robinson.Walter A

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Named Distinguished Univ Prof Professor Emeritus Professor Adjunct Asst Professor Emeritus Associate Professor Asst Professor Assoc Professor Asst Professor Assoc Professor Asst Professor Emeritus Associate Professor Research Professor Assoc Professor Clinical Professor Adjunct Asst Professor Professor Asst Professor Assoc Professor Adjunct Asst Professor Adjunct Assoc Professor Assoc Professor Assoc Professor Assoc Professor Assoc Professor Research Asst Professor Asst Professor Professor Professor Adjunct Professor Teaching Professor Teaching Assoc Professor Adjunct Professor Professor Adjunct Professor Professor Professor Adjunct Asst Professor Asst Professor Professo Assoc Professor Teaching Asst Professor Emeritus Professor Research Asst Professor **Emeritus Professor** Assoc Professor Assoc Professor Professor **Emeritus Professor** Adjunct Professor Adjunct Assoc Professor Adjunct Assoc Professor Emeritus Associate Professor Professor Named Professor Professor Adjunct Asst Professor Adjunct Asst Professor Asst Professor Emeritus Named Distng'd Prof **Emeritus Professor** Professo Emeritus Professor Assoc Professor Adjunct Professor Assoc Professor **Emeritus Professor Emeritus Professor** Asst Professor Emeritus Named Professor Clinical Professor **Emeritus Professor** Teaching Assoc Professor

Emeritus Associate Professor

Asst Professor

Emeritus Professor

Professor

Professor

Assoc Professor

Adjunct Professor

OIED Administration Art and Design Applied Ecology Mathematics Public & International Affairs English Computer Science-engr English Sea Grant Program Crop & Soil Sciences Dept of Clinical Sciences Applied Aquatic Ecology Center BTEC-Biomfg Training Ed Ctr College Of Engineering-dean's Chemical & Biomolecular Engr Statistics ELPHD Marine, Earth And Atmospheric Public & International Affairs **Biological Sciences** Statistics Entomology & Plant Pathology Applied Ecology Entomology & Plant Pathology Ag & Resource Economics Ag & Resource Economics Mechanical & Aerospace Engr Materials Science & Engineering Fitts Dept Indust & Syst Engr Physics Physics Computer Science-engr Landscape Architecture Applied Ecology Parks, Recreation & Tourism Mg Philosophy & Religious Studies Crop & Soil Sciences Electrical & Computer Engr. ELPHD History Design Research Statistics English Art and Design Physics Architecture For & Envir Res Acad Research Computer Science-engr Electrical & Computer Engr. Marine, Earth And Atmospheric **Biological Sciences** Entomology & Plant Pathology Entomology & Plant Pathology ELPHD Computer Science-engr For & Envir Res Acad Research Dept-Population.Health.Pathobi Civil Const & Environ Engineer Mechanical & Aerospace Engr Crop & Soil Sciences Biological And Agricultural En Mechanical & Aerospace Engr Computer Science-engr Applied Ecology Dept-Population, Health, Pathobi **Biological Sciences** Fitts Dept Indust & Syst Engr Plant and Microbial Biology Dept Molecular Biomedical Scie Entomology & Plant Pathology History Textile & Apparel, Technology Business Management-Poole COM Marine, Earth And Atmospheric Animal Science

Horticultural Science

Advanced Analytics

Statistics

Chemical & Biomolecular Engr

Civil Const & Environ Engineer

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Public & International Affairs **Biological Sciences** Statistics Entomology & Plant Pathology Applied Ecology Entomology & Plant Pathology Ag & Resource Economics Ag & Resource Economics Mechanical & Aerospace Engr Materials Science & Engineering Fitts Dept Indust & Syst Engr Physics Physics Computer Science-Engr Landscape Architecture Applied Ecology Parks Recreation & Tourism Mg Philosophy & Religious Studies Crop & Soil Sciences Electrical & Computer Engr. ELPHD History

Art and Design Physics Architecture For & Envir Res Acad Research Computer Science-Engr Electrical & Computer Engr. Marine Earth & Atmospheric Sci Biological Sciences

Entomology & Plant Pathology Entomology & Plant Pathology ELPHD

ELPHD
Computer Science-Engr
For & Envir Res Acad Research

Design Research

Statistics

English

Dept Molecular Biomedical Sci Civil, Const & Env Engineering Mechanical & Aerospace Engr Crop & Soil Sciences Biological And Agri Engr Mechanical & Aerospace Engr Computer Science-Engr Applied Ecology Population Health&Pathobiology Biological Sciences Fitts Dept Indust & Syst Engr

Dept Molecular Biomedical Sci Entomology

History
Textile & Apparel Tech & Mgmt
Business Management-Poole COM
Marine Earth & Atmospheric Sci
Animal Science

Rock PhD Christopher Dewayne Ctr Addit Manf & Log-CAMAL Affiliate Grad Faculty Adjunct Professor Fitts Dept Indust & Syst Engr Affiliate Grad Faculty Fitts Dept Indust & Syst Engr Rock PhD.Christopher Dewayne Rockenhach Alyssa Nicole Professor FIPHD Grad Faculty FIPHD Rodriguez,Jesus Professor **Grad Faculty** Mathematics Mathematics Rodriguez-Puebla, Marcelo Assoc Professor Dept Molecular Biomedical Scie **Grad Faculty** Dept Molecular Biomedical Sci Roe, Richard M. Named Distinguished Professor Entomology & Plant Pathology Grad Faculty Entomology & Plant Pathology Roe Simon C Professor Dent of Clinical Sciences Grad Faculty Dent of Clinical Sciences Affiliate Grad Faculty Roelle, Paul A. Adjunct Asst Professor Marine, Earth And Atmospheric Marine Earth & Atmospheric Sci. Rogers, John Adjunct Professor Dept Molecular Biomedical Scie Affiliate Grad Faculty Dept Molecular Biomedical Sci Roise, Joseph Peter Professor For & Envir Res Acad Research **Grad Faculty** For & Envir Res Acad Research Rojas, Orlando Jose Adjunct Professor Forest Biomaterials Grad Faculty Forest Biomaterials Roland, Christopher M Professor Grad Faculty Physics Physics Rollins, Yvonne B. Emeritus Professor Foreign Languages And Literatu Grad Faculty Foreign Languages and Lit Romo, Lynsey Kluever Asst Professor Communication Grad Faculty Communication Ronquest,Rebecca Ellen Asst Professor Foreign Languages And Literatu **Grad Faculty** Foreign Languages and Lit Rose.Robert B Assoc Professor Biochemistry **Grad Faculty** Biochemistry Ross,Ann Helen Professor Biological Sciences Grad Faculty Biological Sciences Assoc Professor Entomology & Plant Pathology Entomology & Plant Pathology Rotenberg, Dorith Grad Faculty Grad Faculty Rotenberg, Eric Professor Electrical & Computer Engr. Electrical & Computer Engr. Rothenberg, Lori Fay Assoc Professor Textile & Apparel, Technology **Grad Faculty** Textile & Apparel Tech & Mgmt Marine, Earth And Atmospheric Affiliate Grad Faculty Marine Earth & Atmospheric Sci Rotunno.Richard Adjunct Professor Rouphail, Nagui M Distinguished University Prof Civil Const & Environ Engineer **Grad Faculty** Civil, Const & Env Engineering Adjunct Asst Professor ELPHD Affiliate Grad Faculty ELPHD Rouse.Lawrence Lee Roush.William B Adjunct Professor Prestage Poultry Science Affiliate Grad Faculty Prestage Poultry Science Rouskas, Georgios Professor Computer Science-engr **Grad Faculty** Computer Science-Engr Rowe, John E Research Professor Physics **Grad Faculty** Physics Rowe, Jonathan P. Computer Science-engr Affiliate Grad Faculty Computer Science-Engr Adjunct Asst Professor Royal PhD, Kenneth Darrell Asst Professor Dept of Clinical Sciences Grad Faculty Dept of Clinical Sciences Mechanical & Aerospace Engr Emeritus Professor Mechanical & Aerospace Engr Grad Faculty Royster, Larry H. Ru,Hongyu Clinical Asst Professor Dept-Population,Health,Pathobi Affiliate Grad Faculty Population Health&Pathobiology Rubilar, Rafael Alejandro Adjunct Assoc Professor The Forest Nutrition Cooperati Affiliate Grad Faculty Forest Nutrition Cooperative Rubin, Eva R. **Emeritus Professor** Public & International Affairs **Grad Faculty** Public & International Affairs Rudek,Joseph Adjunct Assoc Professor Marine, Earth And Atmospheric Affiliate Grad Faculty Marine Earth & Atmospheric Sci Rudolph, Julia E Professor History Grad Faculty History Named Professor Crop & Soil Sciences Rufty Jr.Thomas W Crop & Soil Sciences Grad Faculty Graduate School-Dean's Office Ruftv.Rebeca C. Professor Grad Faculty Crop & Soil Sciences Rushing PhD, John Eual **Emeritus Professor** Food, Bioprocess & Nutrition Sc **Grad Faculty** Food, Bioprocess & Nutrition Sc Emeritus Associate Professor Russell, Burton Lester Communication Grad Faculty Communication Russell, Dale A **Emeritus Research Professor** Marine, Earth And Atmospheric **Grad Faculty** Marine Earth & Atmospheric Sci Russo Marc Ernest Assoc Professor Grad Faculty Art and Design Art and Design Textile Engr Chemistry & Sci Rust.Jon Paul Professor Academic Programs **Grad Faculty** Rutherford, Teomara Alexandra Asst Professor TELS **Grad Faculty** TELS Rutter PhD, Charles BTEC-Biomfg Training Ed Ctr Affiliate Grad Faculty Sabornie,Edward J. Professor TELS **Grad Faculty** Safley, Charles D. Emeritus Professor Grad Faculty Ag & Resource Economics Ag & Resource Economics Sagui Maria C Grad Faculty Professor Physics Physics Saibaba, Arvind Krishna Asst Professor Mathematics **Grad Faculty** Mathematics Saker, Korinn Edna Assoc Professor Dept Molecular Biomedical Scie **Grad Faculty** Dept Molecular Biomedical Sci Teaching Asst Professor **Engineering Online** Affiliate Grad Faculty Civil, Const & Env Engineering Salamati, Katayoun Salmon, Sonja Irene Assoc Professor Textile Engineering, Chemistry Grad Faculty Textile Engr Chemistry & Sci Saloni.Daniel Erique Assoc Professor Forest Biomaterials **Grad Faculty** Forest Biomaterials Salstad, M. Louise **Emeritus Associate Professor** Foreign Languages And Literatu Grad Faculty Foreign Languages and Lit Salvi, Deepti Arvind Asst Professor Food, Bioprocess & Nutrition Sc **Grad Faculty** Food, Bioprocess & Nutrition Sc Samatova, Nagiza Faridovna Professor Computer Science-engr **Grad Faculty** Computer Science-Engr San Miguel Delgadillo, Adriana Asst Professor Chemical & Biomolecular Engr **Grad Faculty** Chemical & Biomolecular Engr. Professor Food, Bioprocess & Nutrition Sc Grad Faculty Food, Bioprocess & Nutrition Sc Sandeep.K P Sanders, Timothy H Emeritus USDA Prof Food Bioprocess & Nutrition Sc Grad Faculty Food Bioprocess & Nutrition Sc Sang PhD, Shengmin Adjunct Asst Professor Food, Bioprocess & Nutrition Sc **Grad Faculty** Food, Bioprocess & Nutrition Sc Emeritus Associate Professor Sanii,Ezat Fitts Dept Indust & Syst Engr **Grad Faculty** Fitts Dept Indust & Syst Engr Sannes, Philip L. Grad Faculty Dept Molecular Biomedical Scie Dept Molecular Biomedical Sci Sano, Michael Asst Professor Biomedical Program - ENG **Grad Faculty** Biomedical Program-Engineering Sanoff.Henry Emeritus Professor Architecture Grad Faculty Architecture Santiso, Erik Emilio Asst Professor Chemical & Biomolecular Engr Grad Faculty Chemical & Biomolecular Engr. Santos Soares de Freitas, Frederico Asst Professor History **Grad Faculty** History Research Asst Professor Affiliate Grad Faculty Plant and Microbial Biology Saravitz.Carole H Phytotron Sargent,Frank D. **Emeritus Professor** Animal Science **Grad Faculty** Animal Science Saul.Katherine Assoc Professor Mechanical & Aerospace Engr Grad Faculty Mechanical & Aerospace Engr Savage, Carla Diane Professor Computer Science-engr Grad Faculty Computer Science-Engr Teaching Assoc Professor Savariappan, Paul Rajamanickam Statistics Affiliate Grad Faculty Statistics Saveliev, Alexei V. Assoc Professor Mechanical & Aerospace Engr **Grad Faculty** Mechanical & Aerospace Engr Emeritus Professor Sociology & Anthropology Grad Faculty Sociology & Anthropology Sawhney, Man M. Sawicki, Gregory Stephen Adjunct Assoc Professor Biomedical Program - ENG **Grad Faculty** Biomedical Program-Engineering Sawvers.Roby B Professor Accounting-Poole COM Grad Faculty Accounting-Poole COM Savde.Chadi Asst Professor Biological And Agricultural En **Grad Faculty** Biological And Agri Engr Sazdanovic,Radmila Asst Professor Mathematics **Grad Faculty** Mathematics Scafuro, Alessandra Asst Professor Computer Science-engr **Grad Faculty** Computer Science-Engr Scales, Alice Y Teaching Asst Professor Sci, Tech, Engr & Math (STEM) Affiliate Grad Faculty Sci, Tech, Engr & Math (STEM) Scandalios, John G. **Emeritus Professor Biological Sciences Grad Faculty** Genetics Materials Science & Engineering Materials Science & Engineering Scattergood,Ronald O Professor **Grad Faculty**

Art and Design

Physics

Grad Faculty

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Art and Design

Physics

Scearce.J Mark

Schaefer,Thomas M

Professor

Professor

Schaeffer Blake Schaffer Henry F Schaffer.Henry E Schaffer,Kristen J Schal, Coby J Scharf PhD, Frederick S Scharf Valery Fairfax Schecter.Stephen Scheller, Robert Michael Schlosser, Paul M Schmidt, Andrew Philip Schmidt, Jessica Young Schnabel, Lauren V Schnetzer.Astrid Schoen, Martin Schoenfeld, Regina M Scholle,Frank Schrag.Robert Laurence Schreck III.Carl James

Schreiner, Anton F.
Schrimper, Ronald A.
Schroeder, Bastian Jonathan
Schroeder-Moreno, Michelle Shawn

Schroeder-Moreno, Michelle Schulman, Michael D. Schulte, Ann C Schultheis, Jonathan R. Schunert, Sebastian Schwalbe, Michael L. Schwartz, Justin Schwartz, Meghan H Schwartz, Steven J. Schwartz, Michael Richard Schweitzer, Mary Higby Sciaudone, Elizabeth J.

Scotford,Martha Scott,Maxwell J Scott,Stephen Carlos Scroggs,Jeffrey Scott Seader,John J. Sederoff,Heike Inge Ada Sederoff,Ron Ross See,Miles T

Seekamp,Erin Lynn Selgrade,James Francis Semazzi,Fredrick H Semazzi,Fredrick H Sequeira,Ron A. Seracino,Rudolf Serow,Robert C. Seth Carley,Danesha Gita Setser.Bryan Howard

Setzer,Sharon M. Severin PhD,Laura Ruth Seyam,Abdel-fattah Mohamed Shafer,Steven Ray

Setzer,Rhyne Woodrow

Shah,Sanjay Bikram Shahzad,Muhammad Shamblin,Leigh Shamey,Renzo Shane,Simon M. Shane,Simon M.

Shannon,Steven Christopher Sharma,Ratna Rani Shayy Ping Typg

Shaw,Ping-Tung
Shea,Damian
Shear,Theodore Henry
Shearer,Michael
Shearon,Ronald Wilson
Sheats,Mary Katherine
Sheldon,Brian W.
Shelhamer,James Henry
Shelley,Rowland M
Shen,Tengming
Shen,Xipeng
Sheppard,John Douglas
Sherk,Julieta Trevino
Sherman,Barbara Lynn
Sherry,Barbara

Shertzer, Kyle W

Sherwood, Bruce A.

Adjunct Asst Professor
Emeritus Professor
Emeritus Professor
Assoc Professor
Named Distinguished Professor
Adjunct Professor
Clinical Asst Professor
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Adjunct Asst Professor Emeritus Professor Emeritus Professor Adjunct Assoc Professor

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Research Asst Professor

Professor
Adjunct Asst Professor
Emeritus Associate Professor
Professor
Emeritus Distinguished Prof
Professor
Assoc Professor
Emeritus Professor
Emeritus Professor
Research Professor
Adjunct Assoc Professor

Professor Research Assoc Professor Teaching Asst Professor Adjunct Professor Professor Professor Professor Adjunct Professor Professor Asst Professor Professor of the Practice Adjunct Professor Adjunct Professor Assoc Professor Adjunct Assoc Professor **Emeritus Professor** Professor Assoc Professor Professor Professor Asst Professor **Emeritus Professor** Adjunct Professor Adjunct Assoc Professor Adjunct Professor

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Clinical Professor

Adjunct Asst Professor

Research Professor

Professor

Professor

Marine, Earth And Atmospheric Advanced Computing Biological Sciences Architecture Entomology & Plant Pathology Applied Ecology Dept of Clinical Sciences Mathematics For & Envir Res Acad Research

Mathematics
Accounting-Poole COM
Computer Science-engr
Dept of Clinical Sciences
Marine, Earth And Atmospheric
Chemical & Biomolecular Engr
Dept Molecular Biomedical Scie
Biological Sciences
Communication
NC Inst of Climate Studies

Chemistry
Ag & Resource Economics
Civil Const & Environ Engineer
Crop & Soil Sciences
Agricultural & Human Sciences
Psychology
Horticultural Science
Nuclear Engineering

Sociology & Anthropology Materials Science & Engineering Prestage Poultry Science Food, Bioprocess & Nutrition Sc Entomology & Plant Pathology Biological Sciences

Civil Const & Environ Engineer Graphic & Industrial Design Entomology & Plant Pathology

ELPHD
Mathematics
Economics-Poole COM
Plant and Microbial Biology
For & Envir Res Acad Research
Animal Science
Parks, Recreation & Tourism Mg

Mathematics
Marine, Earth And Atmospheric
Marine, Earth And Atmospheric
Entomology & Plant Pathology
Civil Const & Environ Engineer

ELPHD Horticultural Science TELS

Statistics English English

Textile & Apparel, Technology Entomology & Plant Pathology Biological And Agricultural En Computer Science-engr Mgmt, Innovation&Entrepreneur Textile Engineering, Chemistry Dept-Population,Health,Pathobi Prestage Poultry Science Nuclear Engineering Biological And Agricultural En Marine, Earth And Atmospheric Biological Sciences For & Envir Res Acad Research

Biological Sciences
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Mathematics
Agricultural & Human Sciences
Dept of Clinical Sciences
Prestage Poultry Science
Dept-Population, Health, Pathobi
Applied Ecology

Applied Ecology
Materials Science & Engineering
Computer Science-engr
Food, Bioprocess & Nutrition Sc
Horticultural Science
Dept of Clinical Sciences

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Affiliate Grad Faculty Affiliate Grad Faculty Marine Earth & Atmospheric Sci

Genetics Genetics Architecture

Entomology & Plant Pathology Applied Ecology Dept of Clinical Sciences Mathematics

For & Envir Res Acad Research

Mathematics
Accounting-Poole COM
Computer Science-Engr
Dept of Clinical Sciences
Marine Earth & Atmospheric Sci
Chemical & Biomolecular Engr.
Dept Molecular Biomedical Sci
Biological Sciences
Communication

Marine Earth & Atmospheric Sci Chemistry

Ag & Resource Economics Civil, Const & Env Engineering Crop & Soil Sciences

4-H Youth Dev & Fam & Cons Sci

Horticultural Science Nuclear Engr

Nuclear Engr Sociology & Anthropology Materials Science & Engineering Prestage Poultry Science Food, Bioprocess & Nutrition Sc Entomology & Plant Pathology Biological Sciences

Civil, Const & Env Engineering

Entomology & Plant Pathology ELPHD Mathematics Economics-Poole COM

Economics-Poole COM
Plant and Microbial Biology
For & Envir Res Acad Research
Animal Science

Parks Recreation & Tourism Mg

Mathematics

Marine Earth & Atmospheric Sci Marine Earth & Atmospheric Sci

Entomology

Civil, Const & Env Engineering

Horticultural Science TELS

Statistics English English

Textile & Apparel Tech & Mgmt Entomology & Plant Pathology Biological And Agri Engr Computer Science-Engr Mgmt, Innovation & Entrepreneu Textile Engr Chemistry & Sci Prestage Poultry Science

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Prestage Poultry Science
Nuclear Engr
Biological And Agri Engr
Marine Earth & Atmospheric Sci

Biological Sciences For & Envir Res Acad Research

Mathematics
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Dept of Clinical Sciences
Prestage Poultry Science
Population Health&Pathobiology

Applied Ecology
Materials Science & Engineering
Computer Science-Engr
Food, Bioprocess & Nutrition Sc

Horticultural Science
Dept of Clinical Sciences
Dept Molecular Biomedical Sci

Applied Ecology Physics Shew Barbara B Shew Howard D Shi,Wei Shiffler, Donald A Shih, Jason C. Shim Funkyoung Shimura.Fumio Shirwaiker,Rohan Ajit Shoemaker,Paul B. Shore,Scott Harold Showalter.David Scott Showers.William I Shriver, Thomas Eugene Shultz,David A

Sheth Seema Navan

Shumaker Jeffrey, Penny Michelle

Sichitiu, Mihail Lorin Siciliano.Paul David Siderelis, Chrys D. Siewert, Charles Edward Sikes, Michael L. Silber,Robert Silliman VI.Benjamin Sills.Erin Odonnell

Silverberg PhD, Lawrence M

Sills.Robert C.

Silverman.Jules Silverstein, Jack William Simmons III.Otto DeBruhl Simmons Susan Jeanne Simons.Theodore R Simons-Rudolph, Joseph M Simpson, Melanie Anne Simpson, Michael F Simpson,Robert M Simunovic.Josip Sinclair, Geoffrey Allan Sinclair.Thomas R Singer, Michael F. Singh Munindar P Singh.Nadia Siopes, Thomas David

Sirota, Brent S Sit,Roger Carson Sit.Timmv L Sitar Zlatko

Sivaramakrishnan, Kartik Krishnan

Skaar, David Allen Skaggs,Richard W. Skroch, Walter A. Slankas.John Botious Slatta, Richard Wayne Slenning,Barrett D

Sliwinska-Bartowiak, Malgorzata

Slocumb, William S Small.Judy Jo Smallwood, James E. Smart, Robert Charles Smirnov, Alexej I. Smirnova, Tatyana I. Smith Jr, William A Smith.Adrian Alan Smith, Angela Carmella Smith, Carl B. Smith, Charles Eugene Smith, Craig Allen Smith.Craig Randall Smith.Donald E. Smith.Frank J. Smith, Gary W. Smith, Geoffrey W Smith,J C

Smith James W Smith, Jared Smith, Jordan William Smith,Lee

Smith, Nicole Tripp Smith, Ralph Conover Smith V Kerry Smith.William David Smith, William R

Asst Professor Research Asst Professor Named Professor Professo

Emeritus Professor Asst Professor Adjunct Professor Assoc Professor **Emeritus Professor** Adjunct Assoc Professor Teaching Professor Professor Professor Professor

Teaching Asst Professor

Professor Professor Professor Professor Assoc Professor **Emeritus Associate Professor** Professor Professor Adjunct Assoc Professor Professor

Named Distinguished Professor Professor

Research Asst Professor Professor **Emeritus Professor**

Teaching Asst Professor Professor

Adjunct Assoc Professor Adjunct Professor Research Professor Adjunct Asst Professor Adjunct Professor Professor Professor

Adjunct Assoc Professor Emeritus Professor Assoc Professo Adjunct Asst Professor Adjunct Asst Professor Named Distinguished Professor Adjunct Asst Professor Research Asst Professor Emeritus Named Distng'd Prof

Emeritus Professor Adjunct Asst Professor Professor Assoc Professor

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Emeritus Professor Professor Professor Professor Assoc Professor **Emeritus Professor** Research Asst Professor Teaching Assoc Professor **Emeritus Named Professor** Assoc Professor

Emeritus Professor Adjunct Professor Emeritus Professor **Emeritus Professor Emeritus Associate Professor** Professor

Emeritus Associate Professor Adjunct Assoc Professor Asst Professor

Adjunct Asst Professor **Emeritus Professor**

Professor Emrtus Distng'd Univ Prof **Emeritus Named Professor**

Assoc Professor

Plant and Microbial Biology Entomology & Plant Pathology Entomology & Plant Pathology Crop & Soil Sciences Nonwovens Institute Prestage Poultry Science Textile Engineering Chemistry Materials Science & Engineering Fitts Dept Indust & Syst Engr Entomology & Plant Pathology Plant and Microbial Biology Accounting-Poole COM Marine, Earth And Atmospheric

Chemistry Sci, Tech, Engr & Math (STEM) MS Comp Networking-ECE Animal Science

Sociology & Anthropology

Parks, Recreation & Tourism Mg Mathematics Biological Sciences Mathematics

Agricultural & Human Sciences For & Envir Res Acad Research Dept-Population.Health.Pathobi Mechanical & Aerospace Engr Entomology & Plant Pathology Mathematics

Advanced Analytics Applied Ecology Psychology Biochemistry Nuclear Engineering

Dept-Population,Health,Pathobi Food, Bioprocess & Nutrition Sc Marine, Earth And Atmospheric Crop & Soil Sciences Mathematics

Biological Sciences Prestage Poultry Science

Nuclear Engineering Entomology & Plant Pathology Materials Science & Engineering

Biological Sciences Biological And Agricultural En Horticultural Science Lab for Analytic Sciences History

Dept-Population, Health, Pathobi Chemical & Biomolecular Engr Ctr. for Geospatial Analytics English

Dept Molecular Biomedical Scie **Biological Sciences** Chemistry

Fitts Dept Indust & Syst Engr **Biological Sciences**

Textile Engineering, Chemistry Statistics

Marine, Earth And Atmospheric Applied Ecology

Psychology Textile & Apparel, Technology Dept-Population,Health,Pathobi Civil Const & Environ Engineer Entomology & Plant Pathology

Business Management-Poole COM Parks, Recreation & Tourism Mg English ELPHD

Mathematics Ag & Resource Economics Administration - Research Serv Grad Faculty Grad Faculty Grad Faculty **Grad Faculty** Affiliate Grad Faculty Grad Faculty Grad Faculty

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Grad Faculty Grad Faculty Grad Faculty Sociology & Anthropology **Grad Faculty** Plant and Microbial Biology Entomology & Plant Pathology Entomology & Plant Pathology Soil Science

Prestage Poultry Science Textile Engr Chemistry & Sci Materials Science & Engineering Fitts Dept Indust & Syst Engr Entomology & Plant Pathology Microbiology

Accounting-Poole COM Marine Earth & Atmospheric Sci Sociology & Anthropology Chemistry

Sci, Tech, Engr & Math (STEM) Electrical & Computer Engr. Animal Science

Parks Recreation & Tourism Mg Nuclear Engr

Biological Sciences Mathematics

4-H Youth Dev & Fam & Cons Sci For & Envir Res Acad Research Dept Microbiology Path & Para Mechanical & Aerospace Engr Entomology & Plant Pathology

Mathematics Biological And Agri Engr Statistics Applied Ecology Psychology Biochemistry Nuclear Engr

Population Health&Pathobiology Food, Bioprocess & Nutrition Sc Marine Earth & Atmospheric Sci Crop & Soil Sciences

Mathematics Computer Science-Engr **Biological Sciences** Prestage Poultry Science History

Nuclear Engr

Entomology & Plant Pathology Materials Science & Engineering

Mathematics **Biological Sciences** Biological And Agri Engr Horticultural Science Computer Science-Engr

History

Population Health&Pathobiology Chemical & Biomolecular Engr.

English

Dept Molecular Biomedical Sci. **Biological Sciences**

Chemistry Chemistry

Fitts Dept Indust & Syst Engr **Biological Sciences**

ELPHD Textile Engr Chemistry & Sci

Statistics Communication

Marine Earth & Atmospheric Sci Applied Ecology

Psychology

Textile & Apparel Tech & Mgmt Population Health&Pathobiology Civil, Const & Env Engineering

Entomology

Business Management-Poole COM Parks Recreation & Tourism Mg English

Mathematics Ag & Resource Economics Crop & Soil Sciences Sociology & Anthropology Smoot Jean I Emeritus Professor Fnglish Grad Faculty Fnglish Crop & Soil Sciences Smyth Thomas I Grad Faculty Soil Science Professor Teaching Asst Professor Snowden Joy Little Biological Sciences Affiliate Grad Faculty **Biological Sciences** Snyder Jr, Samuel Sword College Of Education **Grad Faculty** Snyder.Amy Marie Clinical Asst Professor Dept of Clinical Sciences Affiliate Grad Faculty Dept of Clinical Sciences Snyder, Wesley E. Emeritus Professor Electrical & Computer Engr. Grad Faculty Electrical & Computer Engr. So Franky Distinguished Professor Materials Science & Engineering Grad Faculty Materials Science & Engineering Sobrero, Patricia M. Agricultural & Human Sciences Affiliate Grad Faculty Solari, Anthony G. Teaching Asst Professor Public & International Affairs Affiliate Grad Faculty Public & International Affairs Solihin, Yan Professor Electrical & Computer Engr. **Grad Faculty** Electrical & Computer Engr. Solomon, Daniel L. Statistics Grad Faculty Statistics Sombers,Leslie A Assoc Professor Chemistry Grad Faculty Chemistry Sondel Beth Leah TFIS Affiliate Grad Faculty Sonenshine, Daniel E Adjunct Professor Entomology & Plant Pathology Affiliate Grad Faculty Entomology Song,Rui Assoc Professor Statistics **Grad Faculty** Statistics Sorensen, Kenneth A. **Emeritus Professor** Entomology & Plant Pathology **Grad Faculty** Entomology Entomology & Plant Pathology Sorenson, Clyde E Professor Entomology & Plant Pathology Grad Faculty Emeritus Professor Grad Faculty Soroos, Marvin Stanley Public & International Affairs **Public & International Affairs** Mechanical & Aerospace Engr Grad Faculty Sorrell Jr. Furman Y Emeritus Professor Mechanical & Aerospace Engr Southern, Phillip S. **Emeritus Professor** Entomology & Plant Pathology **Grad Faculty** Entomology Philosophy & Religious Studies Soyarslan,Sanem Asst Professor Grad Faculty Philosophy & Religious Studies Sozzani, Rosangela Asst Professor Plant and Microbial Biology **Grad Faculty** Plant and Microbial Biology Spafford.Anne McCombe Assoc Professor Grad Faculty Horticultural Science Horticultural Science Affiliate Grad Faculty Spano Sr. Michael Robert Fitts Dept Indust & Syst Engr Spayd,Sara Elizabeth Emeritus Professor Horticultural Science **Grad Faculty** Horticultural Science Spears, Janet F **Emeritus Professor** Crop & Soil Sciences **Grad Faculty** Crop & Soil Sciences Spears, Jerry Wayne Animal Science Grad Faculty Spencer.Stephanie Laine Emeritus Professor History Grad Faculty History Biological Sciences Grad Faculty Biological Sciences Spiker, Steven L. Spires.Hiller A Professor TELS **Grad Faculty** TFIS Spontak, Richard J Distinguished Professor Chemical & Biomolecular Engr **Grad Faculty** Materials Science & Engineering Spooner,Jean Biological And Agricultural En Affiliate Grad Faculty Spooner,Jean **Emeritus Extension Professor** Biological And Agricultural En Affiliate Grad Faculty Biological And Agri Engr Sprinthall, Norman A Emeritus Professor Curr, Instr & Counselor Ed-CED Grad Faculty Curr, Instr & Counselor Ed-CED Spurr. Harvey Wesley Emeritus USDA Prof Entomology & Plant Pathology **Grad Faculty** Entomology & Plant Pathology Srdic.Srdan Research Asst Professor Electrical & Computer Engr. Grad Faculty Electrical & Computer Engr. Srogl PhD,Jiri Adjunct Assoc Professor Chemical & Biomolecular Engr Affiliate Grad Faculty Chemical & Biomolecular Engr. St. Amant.Robert A Professo Computer Science-engr Grad Faculty Computer Science-Engr St. Amant, Robert A Adjunct Professor Computer Science-engr **Grad Faculty** Computer Science-Engr Staddon Jessica Nicola Adjunct Assoc Professor Grad Faculty Computer Science-Engr Computer Science-engr Adjunct Asst Professor Acad Stu Aff-VC and Dean Off Affiliate Grad Faculty Curr, Instr & Counselor Ed-CED Stafford Jr. Thomas Hugh Stage.Scott Andrew Assoc Professor Psychology **Grad Faculty** Psvchology Staicu, Ana-Maria Assoc Professor Statistics **Grad Faculty** Statistics Crop & Soil Sciences Stalker Jr, Harold T Professor Crop & Soil Sciences **Grad Faculty** Grad Faculty Stallmann.Matthias F.M. Professor Computer Science-engr Computer Science-Engr Stallrich.Jonathan Wesley Asst Professor Statistics Grad Faculty Statistics Stancil, Daniel D Named Professor Electrical & Computer Engr. **Grad Faculty** Electrical & Computer Engr. Stanko, Michael A Assoc Professor Business Management-Poole COM **Grad Faculty** Business Management-Poole COM Grad Faculty Stansbury,Kim L Assoc Professor Social Work Social Work Stapelmann, Katharina Asst Professor Nuclear Engineering Grad Faculty Nuclear Engr Stark, Charles Robert Adjunct Assoc Professor Prestage Poultry Science Affiliate Grad Faculty Prestage Poultry Science Starly, Binil Assoc Professor Fitts Dept Indust & Syst Engr **Grad Faculty** Fitts Dept Indust & Syst Engr Steelman, Toddi Angela Adjunct Professor For & Envir Res Acad Research Affiliate Grad Faculty Forest Biomaterials Steer, Michael B. Named Professor Electrical & Computer Engr. **Grad Faculty** Electrical & Computer Engr. Stefanski PhD.Leonard A. Professo Statistics **Grad Faculty** Statistics Stein, Allen Frederick Professor English Grad Faculty English Grad Faculty Stein, Sarah R Assoc Professor Communication Communication Stepanova, Anna N. Asst Professor Plant and Microbial Biology **Grad Faculty** Plant and Microbial Biology Stephenson Jr, James L. Adjunct Asst Professor Microbiology Affiliate Grad Faculty Microbiology Food, Bioprocess & Nutrition Sc Stevenson.Clinton Dale Asst Professor Food, Bioprocess & Nutrition Sc **Grad Faculty** Stevenson, Kathryn Tate Asst Professor Parks, Recreation & Tourism Mg **Grad Faculty** Parks Recreation & Tourism Mg Emeritus Associate Professor Stewart Jr.Ralsa Marshall Agricultural & Human Sciences Grad Faculty Agricultural & Human Sciences Stewart.Amanda Janis Asst Professor Public & International Affairs Grad Faculty Public & International Affairs Stewart, Katharine Elaine Professor Office of Faculty Development **Grad Faculty** Psychology Sci, Tech, Engr & Math (STEM) Grad Faculty Sci, Tech, Engr & Math (STEM) Stiff.Lee V Professo Stikeleather, Larry F. **Emeritus Professor** Biological And Agricultural En **Grad Faculty** Biological And Agri Engr Stiles.Curtis Alexander Clinical Asst Professor Dept of Clinical Sciences Affiliate Grad Faculty Dept of Clinical Sciences Stiles, Phillip J Emeritus Professor Grad Faculty Physics Physics Grads & Temps Stinner.Ronald Edwin **Emeritus Professor** Integrated Pest Mgmt-Research **Grad Faculty** Entomology Stinson, Timothy Linwood Assoc Professor English **Grad Faculty** English Mathematics Grad Faculty Stitzinger, Ernest Lester Professor Mathematics **Emeritus Associate Professor** Marine, Earth And Atmospheric **Grad Faculty** Marine Earth & Atmospheric Sci Stoddard, Edward F Stokely, Matthew H. Adjunct Assoc Professor Grad Faculty Nuclear Engineering Nuclear Engr Stolee, Kathryn Thomasset Asst Professor Computer Science-engi **Grad Faculty** Computer Science-Engr Stoll MD,Regina Adjunct Assoc Professor Fitts Dept Indust & Syst Engr Affiliate Grad Faculty Fitts Dept Indust & Syst Engr Stomp, Anne Marie For & Envir Res Acad Research **Grad Faculty** Stone,Eric A Adjunct Professor **Biological Sciences Grad Faculty Biological Sciences** Stone, John R. **Emeritus Professor** Civil Const & Environ Engineer **Grad Faculty** Civil, Const & Env Engineering Stonebraker, Jeffrey S Assoc Professor **Business Management-Poole COM Grad Faculty** Business Management-Poole COM

FIPHD

Dept of Clinical Sciences

Affiliate Grad Faculty

Grad Faculty

FIPHD

Dept of Clinical Sciences

Storberg-Walker, Julia

Stoskopf, Michael K.

Adjunct Assoc Professor

Professor

Stowe,Devorah Ann Marks Strenkowski,John S. Stringer,Andrew Peter Strote,Noah B Struett,Michael John Stuart,Bryan Lynn Stubbs,Harriett S Stuber,Charles William Stuber,Charles William Stuckey Jr,William C Stucky,Jon M. Stumpf,Mitzi Nichole Sturgill,David Brian

Subbareddy,Pramod Kumar Veera Suh,Minyoung

Suh,Moon Won Suiter,Karl Arthur Sullivan,Craig V. Sullivan,Gene A. Sullivan,Vida Blair Dowling Sullivant,Seth M. Sumerel,Marie B. Sun,Dali Sun,Ge Supak,Stacy Kathleen Surh,Gerald

Sutter, Steven E

Sutton,Rhonda Saeleth Craver Sutton,Turner Bond Swaisgood,Harold E. Swallow,William H. Swangnetr,Manida Swann,Julie LeAnne Swanson,Clifford Richard Swarts PhD,Jason Swartz,Paul Douglas Swartz,Paul Douglas Swartzel,Kenneth R. Swiss,James E.

Switzer, William Lawrence Sylla, Edith D. Szanto, Agnes

Sztajn,Paola Tacker,Robert C. Taheri PhD,Javad

Taheri PhD,Javad
Tai,Eiko
Takeuchi,Yu
Takeuchi,Yu
Taliercio,Earl
Tang,Wenyuan
Tarpy,David R.
Tate,Lloyd Patrick
Tateosian,Laura Gray
Taubenberger,Jeffrey K
Taveirne,Michael Edward
Tayebali,Akhtarhusein A
Taylor Ir,Raymond G
Taylor,Andrew J
Taylor,Bradley William
Taylor,Eideen Z

Tefft,Karen Michele Temple,Traci Lyn Templin Jr,Robert Grant Terando,Adam J. Terry,Stephen D Tesar,Paul

Taylor, Linda Reinders

Taylor, Nicholas Thiel

Tector John O.

Thakur, Siddhartha Tharp, Alan Lee Tharrington, Karen Theil, Elizabeth C. Theil, Michael Herbert Theriot, Casey Michelle Theuer, Richard C.

Theyson,Thomas W Thies-Sprinthall,Lois M Thiessen,Lindsey Danielle

Thigpen III, John F Thomas, Carrie J Professor Clinical Asst Professor Assoc Professor Assoc Professor Adjunct Assoc Professor Research Assoc Professor Emeritus USDA Prof

Clinical Asst Professor

Emeritus USDA Prof Emeritus Professor Emeritus Professor Extension Asst Professor Teaching Assoc Professor

Asst Professor Emeritus Named Professor Adjunct Asst Professor

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Emeritus Professor Assoc Professor Professor Adjunct Asst Professor Asst Professor USDA Professor Teaching Asst Professor Emeritus Associate Professor Assoc Professor

Emeritus Professor Emeritus Distinguished Prof Emeritus Professor Adjunct Asst Professor Distinguished Professor Emeritus Associate Professor Professor

Research Asst Professor Emeritus Named Distng'd Prof Assoc Professor Assoc Professor Emeritus Professor Assoc Professor Professor Adjunct Asst Professor Research Assoc Professor Professor

Adjunct Asst Professor USDA Asst Professor Asst Professor Professor Emeritus Professor Teaching Asst Professor Adjunct Professor Teaching Asst Professor Professor Emeritus Professor Professor Asst Professor Assoc Professor Lecturer Asst Professor Assoc Professor Clinical Asst Professor Teaching Asst Professor Professor of the Practice Adjunct Asst Professor Research Asst Professor Emeritus Professor Assoc Professor **Emeritus Professor** Teaching Asst Professor Emeritus Professor **Emeritus Professor** Asst Professor Adjunct Professor Adjunct Professor **Emeritus Associate Professor** Asst Professor

Adjunct Assoc Professor

Research Assoc Professor

Dept-Population,Health,Pathobi Mechanical & Aerospace Engr Dept-Population,Health,Pathobi History Public & International Affairs Biological Sciences Dept Of Math & Science Educ -

Genetics
Textile & Apparel, Technology
Plant and Microbial Biology
4-H Youth Dev & Fam & Cons Sci
Computer Science-engr
Mechanical & Aerospace Engr
Textile & Apparel, Technology

Administration - Research Serv

Textile & Apparel, Technology Integrated Pest Mgmt-Research Applied Ecology Crop & Soil Sciences Computer Science-engr

Mathematics ELPHD Physics

For & Envir Res Acad Research Ctr. for Geospatial Analytics History

Dept of Clinical Sciences Administration - Extension Ser Entomology & Plant Pathology Food,Bioprocess & Nutrition Sc Statistics

Fitts Dept Indust & Syst Engr Fitts Dept Indust & Syst Engr Dept Molecular Biomedical Scie

English METRIC X-Ray Crystallography Biochemistry

Food,Bioprocess & Nutrition Sc Public & International Affairs Chemistry

History
Mathematics
College Of Education
Marine, Earth And Atmospheric
Fitts Dept Indust & Syst Engr
Foreign Languages And Literatu

Integrated Pest Mgmt-Research For & Envir Res Acad Research Crop & Soil Sciences Electrical & Computer Engr.

Entomology & Plant Pathology Dept of Clinical Sciences Ctr. for Geospatial Analytics Dept-Population,Health,Pathobi Biological Sciences

Civil Const & Environ Engineer

Public & International Affairs Applied Ecology

Accounting-Poole COM
For & Envir Res Acad Research
Communication
College of Design

Dept of Clinical Sciences
DELTA
ELPHD

Applied Ecology
Mech & Aerospace Engr Contract
Architecture

Dept-Population,Health,Pathobi Computer Science-engr Foreign Languages And Literatu

Biochemistry
Textile Engineering, Chemistry
Dept-Population,Health,Pathobi

Dept-Population,Health,Pathobi Food,Bioprocess & Nutrition Sc Textile & Apparel, Technology TELS

Entomology & Plant Pathology Sea Grant Program

Marine, Earth And Atmospheric

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Population Health&Pathobiology Mechanical & Aerospace Engr Population Health&Pathobiology History

Public & International Affairs Biological Sciences

Sci, Tech, Engr & Math (STEM)
Genetics
Genetics

Textile & Apparel Tech & Mgmt Plant and Microbial Biology 4-H Youth Dev & Fam & Cons Sci Computer Science-Engr Mechanical & Aerospace Engr Textile & Apparel Tech & Mgmt Textile & Apparel Tech & Mgmt

Crop & Soil Sciences Computer Science-Engr Mathematics ELPHD Physics

Entomology

For & Envir Res Acad Research Parks Recreation & Tourism Mg

Dept of Clinical Sciences

Entomology & Plant Pathology Food,Bioprocess & Nutrition Sc Statistics

Fitts Dept Indust & Syst Engr Fitts Dept Indust & Syst Engr Dept Molecular Biomedical Sci English

Biochemistry

Food,Bioprocess & Nutrition Sc Public & International Affairs

Chemistry History Mathematics TELS

Marine Earth & Atmospheric Sci Fitts Dept Indust & Syst Engr Foreign Languages and Lit Integrated Pest Mgmt-Research For & Envir Res Acad Research Crop & Soil Sciences Electrical & Computer Engr. Entomology & Plant Pathology Population Health&Pathobiology Parks Recreation & Tourism Mg

Population Health&Pathobiology

Biological Sciences Civil, Const & Env Engineering

ELPHD

Public & International Affairs Applied Ecology Accounting-Poole COM

For & Envir Res Acad Research Communication Architecture Dept of Clinical Sciences Art and Design ELPHD

Applied Ecology Mechanical & Aerospace Engr

Architecture Population Health&Pathobiology

Computer Science-Engr
Foreign Languages and Lit
Biochemistry

Textile Engr Chemistry & Sci Population Health&Pathobiology Food,Bioprocess & Nutrition Sc Textile & Apparel Tech & Mgmt

TELS
Entomology & Plant Pathology

Parks Recreation & Tourism Mg
Marine Earth & Atmospheric Sci

Thomas Frik R Thomas John F Thomas Judith F Thomas, Melvin E Thomas, Rachael Thomas, Richard J Thompson PhD Donald Barry Thompson, Donald L. Thompson Jon F Thompson, Maxine S Thompson, William F. Thomson, Margareta Maria Thomson.Randy I Thorne, Jeffrey L Thornton, Courtney High Thrall.Donald E. Threadgill, David W Thuente, Mary Helen Thurman, Walter N. Tiezzi Mazzoni Della Stella Ma, Francesco Tillev.David R Tilotta, David C Ting.Siu-Man Tittle.Charles Ray Tomasino,Charles Tommerdahl, Mark A Tompkins,Mary B Tompkins, Mary B

Tompkins.Wayne Tonelli.Alan E Tong,Quansong Toomer, Ondulla Tyvette Toomer, Ondulla Tyvette Toplikar, Susan Margaret Townsend,J K Townsend, Latricia Walker Townsend,Scott Tracy.Joseph B Tran,Chau Minh Tran, Hien Trong Traum Nora I Tredway,Lane Patrick Treme,Julianne Trettin,Carl

Triantaphyllou,Hedwig Hirschm Trivedi,Shweta Trundle, Kathy Cabe Truong, Van Den Trussell, Henry J. Tryggyason, Gretar

Tseng,Hung-Wei Tsiatis, Anastasios A Tsuji,Jun Tsuji, Yoshiaki Tsynkov, Semyon Victor Tu.Juei Feng

Trew Jr.Robert James

Tuck, James Tucker, William P. Tung.Chi C. Tupler,Larry A Turinsky, Paul J Turner.Lynn G. Turner,Lynn G. Tvler.Beverly B

Tyler-Walker Jr,Richard Edward

Tzeng Jung-Ying Ullrich.David F. Umbach.Paul David Umstead, Kelly Ann Underwood, Benjamin Shane Underwood, Herbert A. Uni.Zehava Unrath.Claude R

Unruh Snyder,Lori June Unsal, Mithat Upchurch,Robert G. Uzsov, Reha Vaden Shelly I Valacchi PhD.Giuseppe

Valek, Millicent Ann

Professor Professor Emeritus Professor Assoc Professo Research Asst Professor Emeritus Professor Research Assoc Professor Emeritus USDA Prof Professor Assoc Professor Distinguished University Prof

Assoc Professor

Professor

Emeritus Professor Adjunct Professor Emeritus Professor Named Distinguished Professor Research Asst Professor **Emeritus Professor** Professor Professor Emeritus Professor Emeritus Professor Assoc Professor

Emeritus Associate Professor

Emeritus Professor Emeritus Professor Named Professor Adjunct Asst Professor Adjunct Assoc Professor USDA Asst Professor Emeritus Associate Professor Professor Teaching Asst Professor Assoc Professor Assoc Professor Teaching Assoc Professor Professor

Adjunct Professor Teaching Asst Professor Adjunct Professor Named Distinguished Professor Emeritus Professor Teaching Assoc Professor

USDA Professor Professor Adjunct Professor Asst Professor Named Professor Professor Professor Professor Professor Assoc Professor **Emeritus Professor Emeritus Professor** Adjunct Asst Professor Professor

Emeritus Professor Adjunct Asst Professor Professor **Emeritus Associate Professor** Professor Asst Professor Assoc Professor **Emeritus Professor** Adjunct Professor **Emeritus Professor** Assoc Professor Assoc Professor USDA Assoc Professor Named Distinguished Professor Professor Assoc Professor Adjunct Asst Professor

Fnglish Physics Plant and Microbial Biology Sociology & Anthropology Dept Molecular Biomedical Scie Forest Biomaterials Thermal Protection & Comfort C Crop & Soil Sciences English Sociology & Anthropology Plant and Microbial Biology TELS Sociology & Anthropology **Biological Sciences** Office of Faculty Development Dept Molecular Biomedical Scie Biological Sciences English Ag & Resource Economics **Animal Science**

Physics Forest Biomaterials ELPHD Sociology & Anthropology Textile Engineering, Chemistry Biomedical Program - ENG Dept-Population,Health,Pathobi Dept-Population, Health, Pathobi Dept-Population.Health.Pathobi Textile Engineering, Chemistry Marine, Earth And Atmospheric Prestage Poultry Science Food, Bioprocess & Nutrition Sc Art and Design Electrical & Computer Engr. Friday Institute Graphic & Industrial Design Materials Science & Engineering

Economics-Poole COM Entomology & Plant Pathology Ag & Resource Economics For & Envir Res Acad Research Electrical & Computer Engr. Entomology & Plant Pathology Animal Science Sci, Tech, Engr & Math (STEM) Food, Bioprocess & Nutrition Sc Electrical & Computer Engr. Nuclear Engineering Computer Science-engi Statistics **Biological Sciences** Biological Sciences Mathematics

Mechanical & Aerospace Engr

Mathematics

Chemistry Civil Const & Environ Engineer Fitts Dept Indust & Syst Engr Nuclear Engineering Agricultural & Human Sciences Food, Bioprocess & Nutrition Sc Mgmt, Innovation&Entrepreneur **Counseling Services** Statistics

Mechanical & Aerospace Engr

Electrical & Computer Engr.

Mathematics FIPHD Graphic & Industrial Design Civil Const & Environ Engineer Applied Ecology Prestage Poultry Science

Horticultural Science Crop & Soil Sciences **Physics**

Entomology & Plant Pathology Fitts Dept Indust & Syst Engr Dept of Clinical Sciences Kannapolis Research ELPHD

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Plant and Microbial Biology Sociology & Anthropology Dept Molecular Biomedical Sci Forest Biomaterials Textile Engr Chemistry & Sci Crop & Soil Sciences English Sociology & Anthropology Plant and Microbial Biology Elementary Education Sociology & Anthropology

Dept Molecular Biomedical Sci Biological Sciences English Ag & Resource Economics **Animal Science** Physics Forest Biomaterials ELPHD Sociology & Anthropology Textile Engr Chemistry & Sci

Biomedical Program-Engineering

Biological Sciences

Population Health&Pathobiology Population Health&Pathobiology Textile Engr Chemistry & Sci Marine Earth & Atmospheric Sci Prestage Poultry Science Food, Bioprocess & Nutrition Sc Art and Design Electrical & Computer Engr. TFIS Graphic & Industrial Design Materials Science & Engineering Mechanical & Aerospace Engr Mathematics

Entomology & Plant Pathology Ag & Resource Economics For & Envir Res Acad Research Electrical & Computer Engr. Entomology & Plant Pathology **Animal Science**

Food, Bioprocess & Nutrition Sc Electrical & Computer Engr. Nuclear Engr Computer Science-Engr Statistics **Biological Sciences Biological Sciences** Mathematics Mechanical & Aerospace Engr Electrical & Computer Engr.

Chemistry Civil, Const & Env Engineering Fitts Dept Indust & Syst Engr Nuclear Engr

Food, Bioprocess & Nutrition Sc Business Management-Poole COM Curr, Instr & Counselor Ed-CED Statistics Mathematics Adult & Higher Education Graphic & Industrial Design

Civil, Const & Env Engineering Applied Ecology Prestage Poultry Science Horticultural Science Crop & Soil Sciences

Physics Entomology & Plant Pathology Fitts Dept Indust & Syst Engr Dept of Clinical Sciences

Animal Science ELPHD

Van Landeghem Laurianne Chantal Asst Professor Dent Molecular Biomedical Scie Grad Faculty Dent Molecular Biomedical Sci. Emeritus Asst Professor CED General Support VanDerWall William I Sci. Tech. Engr & Math (STEM) Grad Faculty VanDuvn John W Emeritus Named Professor Entomology & Plant Pathology Grad Faculty Entomology VanDyke,C Gerald **Emeritus Professor** Plant and Microbial Biology **Grad Faculty** Plant and Microbial Biology VanHeugten,Eric Professor Animal Science Grad Faculty Animal Science Vandenbergh, John G. Emeritus Professor Applied Ecology Grad Faculty Applied Ecology Vann Matthew Christopher Asst Professor Cron & Soil Sciences Grad Faculty Cron & Soil Sciences Entomology & Plant Pathology Vargo, Edward L Grad Faculty Vashaee, Daryoosh Assoc Professor Electrical & Computer Engr. Grad Faculty Electrical & Computer Engr. Vasu,Ellen S **Emeritus Professor** College Of Education **Grad Faculty** Vasu,Michael L Emeritus Associate Professor Public & International Affairs Grad Faculty Public & International Affairs Assoc Professor Computer Science-engr Vatsavai.Ranga Raiu **Grad Faculty** Computer Science-Engr Vaughan, George B Emeritus Professor Adult & Higher Education Grad Faculty Adult & Higher Education Veal.Matthew Biological And Agricultural En Affiliate Grad Faculty Velev,Orlin Dimitrov Named Professor Chemical & Biomolecular Engr **Grad Faculty** Chemical & Biomolecular Engr. Veliadis.John Victor NG Pwr Elec Natl Mfg Innovatio **Grad Faculty** Electrical & Computer Engr. Venditti,Richard A Professor Forest Biomaterials Grad Faculty Forest Biomaterials Named Distinguished Professor Vepraskas, Michael John Crop & Soil Sciences Grad Faculty Soil Science Nuclear Engr Verghese, Kuruvilla Emeritus Professor **Nuclear Engineering** Grad Faculty Vick, Candace Goode Assoc Professor Parks, Recreation & Tourism Mg **Grad Faculty** Parks Recreation & Tourism Mg Emeritus Professor Grad Faculty Vickery.Kenneth P Vigani, Alessio Clinical Asst Professor Dept of Clinical Sciences Affiliate Grad Faculty Dept of Clinical Sciences Vila-Parrish.Ana Raquel Fitts Dept Indust & Syst Engr Affiliate Grad Faculty Fitts Dept Indust & Syst Engr Adjunct Assoc Professor Villamizar Martinez PhD, Lenin Arturo Dept of Clinical Sciences Asst Professor Dept of Clinical Sciences Grad Faculty Villani.Sara Michelle Extension Asst Professor Entomology & Plant Pathology **Grad Faculty** Entomology & Plant Pathology Vincent, Kenneth Steven Professor **Grad Faculty** Electrical & Computer Engr. Grad Faculty Electrical & Computer Engr. Viniotis.loannis Professor Vinueza Benitez Nelson Rodrigo Asst Professor Textile Engineering, Chemistry Grad Faculty Textile Engr Chemistry & Sci Grad Faculty Vinzant.Cynthia Leslie Asst Professor Mathematics Mathematics Voiland Michael P Sea Grant Program Affiliate Grad Faculty Vose.James M Adjunct Professor For & Envir Res Acad Research Affiliate Grad Faculty For & Envir Res Acad Research Vouk, Mladen A Distinguished Professor Computer Science-engr **Grad Faculty** Computer Science-Engr Vouk,Mladen A Distinguished Professor Ofc Research, Innov & Econ Dev **Grad Faculty** Computer Science-Engr Vukina.Tomislav Professor Ag & Resource Economics Grad Faculty Ag & Resource Economics Grad Faculty Asst Professor Parks Recreation & Tourism Mg Vukomanovic Jelena Parks, Recreation & Tourism Mg Wade.Robert W Teaching Asst Professor Parks, Recreation & Tourism Mg Affiliate Grad Faculty Parks Recreation & Tourism Mg Wages, Dennis P. Professor Dept-Population, Health, Pathobi **Grad Faculty** Population Health&Pathobiology Wagger, Michael G. Emeritus Professor Crop & Soil Sciences Grad Faculty Crop & Soil Sciences Wahls, Harvey E. **Emeritus Professor** Civil Const & Environ Engineer **Grad Faculty** Civil, Const & Env Engineering Walden Michael I Named Distinguished Professor Grad Faculty Ag & Resource Economics Ag & Resource Economics Extension Associate Professor Waldvogel, Michael Gerard Entomology & Plant Pathology **Grad Faculty Entomology & Plant Pathology** Walek,Mary L. **Emeritus Associate Professor** Sociology & Anthropology **Grad Faculty** Sociology & Anthropology Walgenbach, James F. Entomology & Plant Pathology Entomology & Plant Pathology Professo **Grad Faculty** Walker Jr, John T Lecturer Crop & Soil Sciences Affiliate Grad Faculty Marine Earth & Atmospheric Sci Walker, Christopher Scott Dept Molecular Biomedical Scie Asst Professor **Grad Faculty** Dept Molecular Biomedical Sci Biomedical Program - FNG Walker Glenn M Adjunct Assoc Professor Grad Faculty Biomedical Program-Engineering Walker, Mark D Professor Business Management-Poole COM **Grad Faculty** Business Management-Poole COM Walkowiak,Temple A Assoc Professor **Grad Faculty** Elementary Education TELS Wall Jr, John N. Professor English **Grad Faculty** English Wallace III, James M. Assoc Professor Sociology & Anthropology Grad Faculty Sociology & Anthropology Walls PhD.Douglas M. Asst Professor English **Grad Faculty** English Walsh, Rebecca Ann Assoc Professor English Grad Faculty English Walter, William M. **Emeritus USDA Prof** Food, Bioprocess & Nutrition Sc **Grad Faculty** Food, Bioprocess & Nutrition Sc Wang,Gufeng Asst Professor **Grad Faculty** Chemistry Chemistry Wang, Hong Assoc Professor Physics **Grad Faculty** Physics Wang, Huixia Judy Statistics **Grad Faculty** Statistics Wang, Jack Peng-Yu Asst Professor Forest Biotech Program Grad Faculty For & Envir Res Acad Research Wang, Wenye Professor MS Comp Networking-ECE **Grad Faculty** Electrical & Computer Engr Wang, Xiaogang Computer Sci-Engr Grads & Temp Affiliate Grad Faculty Wang,Xiaogang Adjunct Professor Computer Science-engr Affiliate Grad Faculty Computer Science-Engr Wang, Xiaogang Adjunct Professor Electrical & Computer Engr. Affiliate Grad Faculty Electrical & Computer Engr. Ward, Donn R. Emeritus Professor Food Bioprocess & Nutrition Sc Grad Faculty Food Bioprocess & Nutrition Sc. Ward Jason Kellam Asst Professor Biological And Agricultural En Grad Faculty Biological And Agri Engr Lecturer Ward, Michael E. ELPHD **Grad Faculty** ELPHD Professor of the Practice ELPHD Grad Faculty ELPHD Ward.Michael E Ward, Stephanie Hill Asst Professor **Animal Science Grad Faculty** Animal Science Warner John Christopher Adjunct Assoc Professor Marine, Earth And Atmospheric Affiliate Grad Faculty Marine Earth & Atmospheric Sci Warner, Wendy J Assoc Professor Agricultural & Human Sciences Agricultural & Extension Edu Grad Faculty Warr.Richard S Professor Business Management-Poole COM **Grad Faculty** Business Management-Poole COM Warren, Catherine A English **Grad Faculty** English Professo Social Work Social Work Warren, Jocelyn DeVance Assoc Professor **Grad Faculty Emeritus Associate Professor** For & Envir Res Acad Research For & Envir Res Acad Research Warren, Sarah Timberlake **Grad Faculty** Business Management-Poole COM Grad Faculty Warsing, Donald P Assoc Professor Business Management-Poole COM Waschka II, Rodney Anthony Professor Interdisciplinary Studies **Grad Faculty** Interdisciplinary Studies Washburn, Steven Paul **Emeritus Professor** Animal Science **Grad Faculty** Animal Science Wasik, John L. Statistics **Grad Faculty** Statistics **Emeritus Professor** Wasiolek,Suzanne J Adjunct Asst Professor ELPHD Affiliate Grad Faculty Waters Jr, William M. **Emeritus Associate Professor** Sci, Tech, Engr & Math (STEM) Sci, Tech, Engr & Math (STEM) **Grad Faculty** Watson, Benjamin Allen Assoc Professor Computer Science-engi **Grad Faculty** Computer Science-Engr

Entomology & Plant Pathology

Sci, Tech, Engr & Math (STEM)

Grad Faculty

Grad Faculty

Entomology & Plant Pathology

Dept Of Math & Science Edu-tlc

Watson, David W

Watson, Larry W

Professor

Emeritus Associate Professor

Watzin Mary Wear David N Weber Jerome B Wechsberg PhD, Wendee Mara Wegmann, Karl William Wehner, Todd Craig Wehring PhD.Bernard William Wei, Qingshan Weinhold, Paul S Weisel, Deborah Lamm Weiss,Ira R Weissinger, Arthur K. Weisz, P Randall Welby, Charles W. Wells,J C Wells, Randy Wenig,Robert E. Weninger, Keith R. Wentworth.Thomas R. Werner, Dennis J. Wernsman, Earl A. Wertz, Dennis W. Wescott II. Joseph Warren Wessels, Walter I. West II, Harvey A West, Andre J West.Harry C. Westermeyer, Hans Daniel Westmoreland, Phillip R Whangbo, Myung H. Wheatley, John H. Wheeler, Elisabeth A. Whetten,Ross W. Whipker, Brian E Whitacre, Michael David White.Jeffrev G. White,Leonard Wilson White Robert E. White,Susan Norma White Susan Norma Whitfield.Anna Elizabeth Whitlow,Lon Weidner Whitted, John Turner Whitten, Jerry Lynn Widman, Laura Marie Wiehe Fric N Wiegmann, Brian M Wiener,Russell W Wiese, Dennis Eugene Wiley,Stephen B Wilk.John C Wilkinson, Richard R. Williams Jr, Billy M Williams, Antony J Williams, Brenda B Williams.Cathy Sue Williams, Charles Michael Williams, Christopher J Williams, Cranos M Williams.Gavin John Williams, James O. Williams.Laurel E Williams.Laurie A Williams,Linda R. Williams, Paul F. Williams,Saundra W Williams.Stelfanie Williamson John D Willits Daniel H Willoughby PhD,Julie Ann Wilson, Alyson Gabbard Wilson, Elizabeth B Wilson James Reed Wilson, Jonee Wilson,Lorenzo G. Wilson, Mark A Winchester Jr, Samuel Clyde Wineland, Michael John Wineland Michael John Winner, William E

Winston, Hubert

Professor Adjunct Professor Emeritus Professor Adjunct Professor Assoc Professor Professor Research Professor Asst Professor Research Assoc Professor Teaching Asst Professor Professor Emeritus Professor Emeritus Professor **Emeritus Professor** Emeritus Professor Emeritus Associate Professor Professor Professor Named Distinguished Professor Emeritus Named Distng'd Prof Assoc Professor Adjunct Asst Professor Emeritus Professor

Research Assoc Professor Asst Professor Emeritus Associate Professor Asst Professor Professor Professor **Emeritus Associate Professor Emeritus Professor** Professor

Emeritus Associate Professor Assoc Professor Professor of the Practice Emeritus Professor

Adjunct Assoc Professor Professor Emeritus Professor Adjunct Professor Emeritus Professor Asst Professor Professor Named Professor Adjunct Assoc Professor Adjunct Asst Professor Assoc Professor **Emeritus Professor Emeritus Professor** Professor Professor Teaching Asst Professor Teaching Asst Professor Emeritus Professor Adjunct Asst Professor Assoc Professor Assoc Professor **Emeritus Professor** Adjunct Professor Distinguished Professor

Professor Professor

Professor Adjunct Asst Professor

Asst Professor **Emeritus Professor** Assoc Professor **Emeritus Named Professor**

Emeritus Clinical Assoc Prof

Emeritus Associate Professor

Adjunct Asst Professor

Emeritus Professor

Adjunct Professor **Emeritus Professor** Extension Associate Professor

College of Natural Resources For & Envir Res Acad Research Cron & Soil Sciences Psychology Marine, Earth And Atmospheric Horticultural Science Nuclear Engineering Chemical & Biomolecular Engr Biomedical Program - ENG Public & International Affairs Mgmt, Innovation&Entrepreneur Crop & Soil Sciences Cron & Soil Sciences Marine, Earth And Atmospheric Entomology & Plant Pathology Crop & Soil Sciences Sci, Tech, Engr & Math (STEM) **Physics** Plant and Microbial Biology Horticultural Science Crop & Soil Sciences Chemistry

ELPHD Economics-Poole COM Ctr Addit Manf & Log-CAMAL Textile & Apparel, Technology English Dept of Clinical Sciences

Chemical & Biomolecular Engr Chemistry Sci, Tech, Engr & Math (STEM) Forest Biomaterials Tree Improvement Cooperative Horticultural Science Dept of Clinical Sciences Crop & Soil Sciences FREEDM Center

Mathematics Sea Grant Program Marine Farth And Atmospheric Entomology & Plant Pathology Animal Science

Chemistry Psychology Sci, Tech, Engr & Math (STEM) Entomology & Plant Pathology Marine, Earth And Atmospheric

Electrical & Computer Engr.

ELPHD Communication Animal Science Landscape Architecture Civil Const & Environ Engineer Textile Engineering, Chemistry Mathematics FLPHD

Prestage Poultry Science Electrical & Computer Engr. Chemistry Public & International Affairs Dept of Clinical Sciences Computer Science-engr Social Work

Prestage Poultry Science

Accounting-Poole COM ELPHD ELPHD

Horticultural Science Biological And Agricultural En Textile Engineering, Chemistry Statistic - ORIED LAS CALS - Academic Programs Fitts Dept Indust & Syst Engr TFIS

Horticultural Science Psychology

Textile & Apparel, Technology Prestage Poultry Science Dept-Population,Health,Pathobi For & Envir Res Acad Research Chemical & Biomolecular Engr

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For & Envir Res Acad Research For & Envir Res Acad Research Cron & Soil Sciences

Psychology Marine Earth & Atmospheric Sci Horticultural Science Nuclear Engr

Chemical & Biomolecular Engr. Biomedical Program-Engineering Public & International Affairs Mgmt, Innovation & Entrepreneu Crop & Soil Sciences

Crop & Soil Sciences Marine Earth & Atmospheric Sci Entomology & Plant Pathology Crop & Soil Sciences

Dept Of Math & Science Edu-tlc **Physics**

Plant and Microbial Biology

Horticultural Science Crop & Soil Sciences Chemistry ELPHD

Economics-Poole COM Fitts Dept Indust & Syst Engr Textile & Apparel Tech & Mgmt

English Dept of Clinical Sciences

Chemical & Biomolecular Engr. Chemistry

Sci, Tech, Engr & Math (STEM)

Forest Biomaterials For & Envir Res Acad Research Horticultural Science Dept of Clinical Sciences

Soil Science Electrical & Computer Engr.

Marine Farth & Atmospheric Sci **Entomology & Plant Pathology**

Animal Science Electrical & Computer Engr.

Chemistry Psvchology

Sci, Tech, Engr & Math (STEM) Entomology & Plant Pathology Marine Earth & Atmospheric Sci **ELPHD**

Communication Animal Science Landscape Architecture Civil, Const & Env Engineering Textile Engr Chemistry & Sci

Mathematics FIPHD

Prestage Poultry Science Prestage Poultry Science Electrical & Computer Engr.

Chemistry

Public & International Affairs Dept of Clinical Sciences Computer Science-Engr Social Work

Accounting-Poole COM

Adult & Higher Education ELPHD

Horticultural Science Biological And Agri Engr Textile Engr Chemistry & Sci Statistics

Agricultural & Extension Edu

TFIS

Horticultural Science Psychology

Textile & Apparel Tech & Mgmt

Population Health&Pathobiology For & Envir Res Acad Research Chemical & Biomolecular Engr.

Wirt Lesley Grieco ELPHD Affiliate Grad Faculty Assoc Professor Elementary Education Wiseman, Angela Michelle TELS Grad Faculty Witt.Mary Ann Emeritus Professor Foreign Languages And Literatu Grad Faculty Foreign Languages and Lit Wogalter, Michael S **Emeritus Professor** Psychology **Grad Faculty** Wohlgenant, Michael K. Emeritus Named Professor Ag & Resource Economics **Grad Faculty** Ag & Resource Economics Wolcott, Donna Lee Emeritus Associate Professor Marine, Earth And Atmospheric Grad Faculty Marine Earth & Atmospheric Sci Wolcott Thomas G Emeritus Professor Marine, Earth And Atmospheric Grad Faculty Marine Farth & Atmospheric Sci Wolfe, Barbara A. Adjunct Asst Professor Dept of Clinical Sciences Affiliate Grad Faculty Dept of Clinical Sciences Wolfinger, Russell D. Adjunct Professor Statistics Affiliate Grad Faculty Statistics Wolfram, Walter A Named Distinguished Univ Prof English **Grad Faculty** English Wollenzien,Paul L Professor Biochemistry Grad Faculty Biochemistry Wong,Chau-Wai Asst Professor Electrical & Computer Engr. Affiliate Grad Faculty Electrical & Computer Engr. Wood, Michael William Adjunct Asst Professor Dent of Clinical Sciences Affiliate Grad Faculty Dent of Clinical Sciences Woodbridge, Janie Fleming Asst Professor Textile & Apparel, Technology Grad Faculty Textile & Apparel Tech & Mgmt Woodley PhD, Alexander Lake Asst Professor Crop & Soil Sciences **Grad Faculty** Crop & Soil Sciences Woodrum.Eric M. **Emeritus Professor** Sociology & Anthropology **Grad Faculty** Sociology & Anthropology Woodward,Carol S Adjunct Professor Mathematics Affiliate Grad Faculty Mathematics Wormsley,William E Adjunct Assoc Professor Affiliate Grad Faculty Sociology & Anthropology Sociology & Anthropology Worrall Louise Gail Affiliate Grad Faculty Adjunct Asst Professor Nuclear Engineering Nuclear Engr Worsham, Arch D. **Emeritus Professor** Crop & Soil Sciences **Grad Faculty** Crop & Soil Sciences Wright, Charles Gerald Emeritus Professor Entomology & Plant Pathology Grad Faculty Entomology Wright, David R Adjunct Asst Professor Computer Science-engr Affiliate Grad Faculty Computer Science-Engr Wright, Fred Andrew Professor Statistics Grad Faculty Statistics Emeritus Associate Professor Accounting-Poole COM Wright.Ruth Lorraine Accounting-Poole COM Grad Faculty Wu PhD.Tianfu Asst Professor Electrical & Computer Engr. **Grad Faculty** Electrical & Computer Engr. Wu.Fen Professor Mechanical & Aerospace Engr **Grad Faculty** Mechanical & Aerospace Engr Wu,Qingqing Asst Professor Business Management-Poole COM Grad Faculty Business Management-Poole COM Wust, Valerie Ann Assoc Professor Foreign Languages And Literatu Grad Faculty Foreign Languages and Lit Wver.Marv B Assoc Professor Psychology Psychology Grad Faculty Wynne, Johnny Calvin Emeritus Named Professor Dean's Office - CALS Grad Faculty Crop & Soil Sciences Wysk,Richard A Named Professor Fitts Dept Indust & Syst Engr **Grad Faculty** Fitts Dept Indust & Syst Engr Xi,Lin Research Assoc Professor **Animal Science Grad Faculty Animal Science** Xia,Xin Rui Biological Sciences Affiliate Grad Faculty Xiang,Qiuyun Professor Plant and Microbial Biology Grad Faculty Plant and Microbial Biology **Grad Faculty** Xiao.Luo Asst Professor Statistics Statistics Plant and Microbial Biology Xie.Devu Professor Plant and Microbial Biology Grad Faculty Xie,Lian Professor Marine, Earth And Atmospheric **Grad Faculty** Marine Earth & Atmospheric Sci Xie.Tao Adjunct Professor Computer Science-engr Affiliate Grad Faculty Computer Science-Engr Xu PhD,Guozhou Asst Professor Biochemistry **Grad Faculty** Biochemistry Fitts Dent Indust & Syst Engr Grad Faculty Fitts Dept Indust & Syst Engr Asst Professor XII XII Grad Faculty Xu.Yingiiao Assoc Professor Textile & Apparel, Technology Textile & Apparel Tech & Mgmt Yadav,Meeta Adjunct Assoc Professor Electrical & Computer Engr. Affiliate Grad Faculty Electrical & Computer Engr. Asst Professor **Nuclear Engineering Grad Faculty** Nuclear Engr Yang,Ge Yang,Shu Asst Professor Statistics **Grad Faculty** Statistics Forest Biomaterials Grad Faculty Forest Biomaterials Yao.Yuan Asst Professor Entomology & Plant Pathology Affiliate Grad Faculty Entomology & Plant Pathology Ye Weimin Adjunct Asst Professor Yelverton, Fred H. Professor Crop & Soil Sciences **Grad Faculty** Crop & Soil Sciences Yencho, George C Named Professor Horticultural Science **Grad Faculty** Horticultural Science Research Asst Professor Affiliate Grad Faculty Yeom, Bong-Yeol Textile Engineering, Chemistry Textile Engr Chemistry & Sci Yingling, Yaroslava G Materials Science & Engineering Grad Faculty Materials Science & Engineering Professor Yoder, Jeffrey A. Assoc Professor Dept Molecular Biomedical Scie **Grad Faculty** Dept Molecular Biomedical Sci Social Work Social Work Yoon,Intae Assoc Professor **Grad Faculty** York Jr, James W Research Professor **Physics** Affiliate Grad Faculty Physics York, Alan Clarence **Emeritus Named Professor** Crop & Soil Sciences **Grad Faculty** Crop & Soil Sciences Yoshikawa.Hiroto Asst Professor **Dept of Clinical Sciences Grad Faculty Dept of Clinical Sciences** Young Jr, Robert V. Emeritus Professor English Grad Faculty English Young, Albert R. Professor Physics Grad Faculty Physics Young, Carl A Assoc Professor TELS **Grad Faculty** TELS Young, Eric Professor Administration - Research Serv **Grad Faculty** Horticultural Science Young, Greggry S Assoc Professor Mgmt, Innovation&Entrepreneur **Grad Faculty** Mgmt, Innovation & Entrepreneu Young, James H. **Emeritus Professor** Biological And Agricultural En **Grad Faculty** Biological And Agri Engr Young,Robert E. Fitts Dept Indust & Syst Engr Grad Faculty Fitts Dept Indust & Syst Engr **Emeritus Professor** Young,Robert M Adjunct Professor Computer Science-engr Affiliate Grad Faculty Computer Science-Engr Young, Sidney S Adjunct Professor Statistics Affiliate Grad Faculty Statistics Young, Tamara V Assoc Professor ELPHD Grad Faculty ELPHD Youngblood III,Robert Walker Adjunct Professor Nuclear Engineering Affiliate Grad Faculty Nuclear Engr Youngblood.Curtis Edmund Teaching Asst Professor Economics-Poole COM Affiliate Grad Faculty Economics-Poole COM Biological And Agricultural En Youssef, Mohamed A Assoc Professor Grad Faculty Biological And Agri Engr Yu.Donna G Teaching Assoc Professor Electrical & Computer Engr. **Grad Faculty** Electrical & Computer Engr. Yu,Shaocai Adjunct Professor Marine, Earth And Atmospheric Affiliate Grad Faculty Marine Earth & Atmospheric Sci Research Assoc Professor FREEDM Center Grad Faculty Electrical & Computer Engr. Yu, Wensong Yuan,Fuh-Gwo Named Professor Mechanical & Aerospace Engr **Grad Faculty** Mechanical & Aerospace Engr Professor Grad Faculty Yuan.Wengiao Biological And Agricultural En Biological And Agri Engr **Grad Faculty** Yuter.Sandra E. Professor Marine, Earth And Atmospheric Marine Earth & Atmospheric Sci Zagacki.Kenneth S. Professor Communication **Grad Faculty** Communication Zaharoff, David Alexander Assoc Professor Biomedical Program - ENG **Grad Faculty Biomedical Program-Engineering** Zahn, Margaret A **Emeritus Professor** Sociology & Anthropology **Grad Faculty** Sociology & Anthropology Zanno,Lindsay E Research Asst Professor Applied Ecology **Biological Sciences Grad Faculty**

Toxicology

Social Work

Academic Success

Zeldin Darryl C

Zelna.Carrie L

Zelter,Barbara A.

Adjunct Professor

Adjunct Asst Professor

Clinical Asst Professor

Toxicology

Social Work

FIPHD

Affiliate Grad Faculty

Affiliate Grad Faculty

Affiliate Grad Faculty

Zeng Zhaohang Zenkov.Dmitry Valerievich Zering.Kelly D. Zerkle, Michael Leigh Zhang,Daowen Zhang,Hao Zhang,Qiang Zhang,Qing Chun Jon Zhang,Qing Chun Jon Zhang,Xiangwu Zhang, Yang Zheng,Xiaoyong Zhirnov.Victor Zhou,Hua Zhou, Huiyang Zhou,Yihui Zhu,Yong Zhu.Yuntian T Zia.Paul Z Ziegler,Conrad Lawrence Ziemann, Paul Jeffrey Zikry, Mohammed A Zink James Richard Zobel.Richard W Zobel.Richard W Zonderman, David Aaron Zorner, Paul S. Zorowski, Carl F. Zuckerman, Gilroy J. Zuiches.James J de Queiroz, Anderson Rodrigo de Souza e Silva, Adriana Araujo

van Kempen,Theo A

van Zanten John H.

van der Lelie.Daniel

von Haefen,Roger H.

Named Distinguished Professor Professor Professor Adjunct Assoc Professor Adjunct Asst Professor Adjunct Professor Professor Professor Professor Adjunct Assoc Professor Adjunct Asst Professor Professor Research Asst Professor Professor Named Professor Adjunct Professor

Emrtus Distng'd Univ Prof Adjunct Professor Named Professor Assoc Professor USDA Professor Adjunct Professor Professor Adjunct Professor **Emeritus Named Professor** Assoc Professor Emeritus Professor Adjunct Asst Professor Assoc Professor Adjunct Professor Teaching Asst Professor Adjunct Professor Assoc Professor

Horticultural Science Mathematics Ag & Resource Economics **Nuclear Engineering** Statistics Statistics Mathematics NG Pwr Elec Natl Mfg Innovatio Electrical & Computer Engr. College Of Textiles-dean's Off Marine, Earth And Atmospheric Ag & Resource Economics Materials Science & Engineering Statistics Electrical & Computer Engr. **Biological Sciences** Mechanical & Aerospace Engr Materials Science & Engineering Civil Const & Environ Engineer Marine, Earth And Atmospheric Marine, Earth And Atmospheric Mechanical & Aerospace Engr Public & International Affairs Crop & Soil Sciences Crop & Soil Sciences History Horticultural Science College Of Engineering-dean's Accounting-Poole COM Sociology & Anthropology Civil Const & Environ Engineer Communication Animal Science BTEC-Biomfg Training Ed Ctr Plant and Microbial Biology Ag & Resource Economics

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Grad Faculty Mathematics **Grad Faculty** Ag & Resource Economics Nuclear Engr Statistics Mathematics Electrical & Computer Engr. Textile Engr Chemistry & Sci Marine Earth & Atmospheric Sci Ag & Resource Economics Materials Science & Engineering Statistics Electrical & Computer Engr. **Biological Sciences** Mechanical & Aerospace Engr Materials Science & Engineering Civil, Const & Env Engineering Marine Earth & Atmospheric Sci Marine Earth & Atmospheric Sci Mechanical & Aerospace Engr Public & International Affairs Crop & Soil Sciences Crop & Soil Sciences History Horticultural Science Mechanical & Aerospace Engr Accounting-Poole COM Sociology & Anthropology

Civil, Const & Env Engineering

Chemical & Biomolecular Engr.

Ag & Resource Economics

Communication

Animal Science

Microbiology

Statistics

NC State Policies

North Carolina State University is committed to academic integrity, and all students are required to adhere to the NC State Code of Student Conduct. Individual policies on conduct, including those listed below, are posted on University Policies, Regulations, and Rules (PRRs).

University Patent Procedures
Grievance Procedures for Graduate Students
Code of Student Conduct
Academic Integrity
Policy on Illegal Drugs
Sexual Harassment Policy
Racial Harassment Policy
University Copyright Procedures

Equal Opportunity and Non-Discrimination

It is the policy of the State of North Carolina to provide equality of opportunity in education and employment for all students and employees. Accordingly, the university does not practice or condone unlawful discrimination in any form against students, employees or applicants on the basis of race, color, religion, creed, sex, national origin, age, disability or veteran status. Nor does the university allow discrimination on the basis of sexual orientation with respect to internal university matters that do not contravene federal or state law and that do not interfere with the University's relationships with outside organizations, including the federal government, the military, ROTC, and private employers. [NOTE: The NC State University equal opportunity and nondiscrimination policy includes transsexual individuals within the policy's prohibitions against discrimination on the basis of sex. This includes actual or perceived gender identity and gender expression. See Price Waterhouse v. Hopkins, 490 U.S. 228 (1989); Smith v. City of Salem, 378 F.3d 566 (6th Circ. 2004).] Retaliation against any person complaining of discrimination is in violation of federal and state law and North Carolina State University policy, and will not be tolerated.

Unlawful Harassment

Harassment based upon race, color, religion, creed, sex, national origin, veteran status, age, or disability is a form of discrimination in violation of federal and state law and North Carolina State University policy and will not be tolerated. It is the internal policy of North Carolina State University to prohibit harassment on the basis of sexual orientation. Retaliation against any person complaining of harassment is in violation of federal and state law and North Carolina State University policy, and will not be tolerated. North Carolina State University will respond promptly to all complaints of harassment and retaliation. Violation of this policy can result in serious disciplinary action up to and including expulsion for students or discharge for employees.

Every individual is encouraged, and should feel free, to seek assistance, information and guidance from his/her supervisor, the Office for Equal Opportunity, the Office of Student Conduct or the Employees Relations section of Human Resources. For additional information, contact: Office for Equal Opportunity, 1 Holladay Hall, Box 7530, North Carolina State University, Raleigh, NC 27695-7530, Phone: (919) 513-1234 or 515-3148.

Disability Services Office

Individuals desiring reasonable accommodations for their documented disabilities should contact the <u>Disability Services Office</u> (DSO), 2751 Cates Avenue, Third Floor-First Year College Commons, (919) 515-7653 (Voice), (919) 515-8830 (TTY). Services and accommodations are provided based on an individual's documented needs and are determined in consultation with the individual and a DSO representative. For students, such requests should be made far in advance of registration deadlines to ensure timely services and accommodations. DSO will maintain appropriate confidentiality of records and communication regarding disability.

Archives

Incoming students are governed by the rules and regulations in force the semester they are accepted into a program. Previous Graduate Catalogs can be downloaded in PDF format here.

Graduate Catalog (2017-2018)

Graduate Catalog (2016-2017)

Graduate Catalog (2015-2016)

Graduate Catalog (2014-2015)

Graduate Catalog (2013-2014)

Graduate Catalog (2012-2013)

Graduate Catalog (2011-2012)

Graduate Catalog (2010-2011)

Graduate Catalog (2009-2010)

Graduate Catalog (2008-2009)

Graduate Catalog (2007-2008)

Graduate Catalog (Spring 2007)

Graduate Catalog (Fall 2006)

Graduate Catalog (Spring 2006)

Graduate Catalog (Fall 2005)

Graduate Catalog (Spring 2005)

Graduate Catalog (Fall 2004)

Graduate Catalog (Spring 2004)

Graduate Catalog (Fall 2003)