## The Graduate School of the College of Charleston

2013-2014 Catalog

## Equal Opportunity Policy

It is the Policy of the College of Charleston to promote and protect a learning and living environment where civil discourse, respect for the individual and appreciation for the diversity of human experiences are valued as compelling academic interests. Accordingly, it is a violation of this Policy for any member of the College Community to discriminate or harass students or employees, or applicants for admission to the College or applicants for any College employment position, based on gender, sexual orientation, gender identity or expression, age, race, color, religion, national origin, veterans' status, genetic information, or disability, as proscribed by law and as further described below. In addition, discrimination against members or potential members of the United States Uniform Services, as proscribed by the Uniformed Services Employment and Reemployment Rights Act (USERRA), is also prohibited under this Policy. Retaliation against any person arising from the good faith reporting of a suspected violation of this Policy, or for participating in an investigation of discrimination under this Policy, is strictly prohibited.
Complaints of discrimination including sexual harassment and abuse may be conveyed to or filed with: (1) Director of Human Relations ("HRel"): for Complainants who are employees, students, College volunteers, College invitees or employees of College contractors alleging Discrimination on College owned or leased property ("College Property"); (2) An Associate Provost: for Complainants who are faculty and administrative staff employed by Academic Affairs and who elect not to file with the Senior Vice President for Legal Affairs, or Office of Human Relations and Minority Affairs; (3) Dean of Students: for Complainants who are students only; or (4) Senior Vice President for Legal Affairs: for all of the foregoing. (see College Policy No. 9.1.10 at http ://policy.cofc.edu/policy.php for more details on the College's Policy).

## Accreditation

The College of Charleston is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award the Artium Baccalaureatus, the Bachelor of Arts, the Bachelor of Science, the Master of Arts, the Master of Arts in Teaching, the Master of Business Administration, the Master of Science, the Master of Education, and the Master of Public Administration.

Contact: Southern Association of Colleges and Schools Commission on Colleges at 1866 Southern Lane Decatur, GA 30033-4097 or call 404.679.4500 for questions about the accreditation of the College of Charleston.

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# The Graduate School of the College of Charleston 

## Dear Students and Prospective Students:

## Welcome to the Graduate School of the College of Charleston!

Charleston, located in the heart of the South Carolina Lowcountry, is a fantastic place to undertake graduate study. Our master's degrees and certificate programs take advantage of the unique opportunities provided by the people, institutions and environment of the area and offer the specialized knowledge and training sought by professionals living and working in the region. Because of the superb credentials of our faculty and relatively small size of our programs, graduate students enjoy close personal relationships with their mentors and have diverse opportunities for scholarly research and experiential learning. Faculty are eager to work with students inside and outside the classroom. We encourage students to engage in research and to attend academic conferences with us. The Graduate School has established special grants for student research and presentation projects and encourages faculty to include graduate students in grant proposals.

As the College's core values affirm, students, faculty and staff exhibit a high level of social responsibility and share a commitment to local, national and global communities. We look forward not only to your contributions to the intellectual life of our academic community in the next few years, but also to those future contributions you will make to the development of the city, state and world as alumnae/i.

Our website is designed to answer questions you may have about program requirements and regulations, Graduate School personnel and contact information, research grants and presentation opportunities, financial aid, student employment, and campus and community life. If you cannot find the information you need using our website, please do not hesitate to contact the Graduate School Office-in person, by phone or by email. You can also follow our blog and numerous Twitter accounts and become our fan on Facebook. We have a wonderful staff that is eager to get to know you personally and to assist you in making your graduate experience at the College of Charleston an exciting and productive time of intellectual and personal growth.

On behalf of everyone in the Graduate School, I wish you the best in your upcoming studies.
Sincerely,
Amy Thompson McCandless
Dean of the Graduate School

## Administration

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## College of Charleston Board of Trustees

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## Statement of Institutional Mission

The College of Charleston is a state supported comprehensive institution providing a high quality education in the arts and sciences, education and business. Consistent with its heritage since its founding in 1770, the College retains a strong liberal arts undergraduate curriculum. Located in the heart of historic Charleston, it strives to meet the growing educational demands primarily of the Lowcountry and the state and, secondarily, of the Southeast. A superior quality undergraduate program is central to the mission of the College.

The College of Charleston seeks applicants capable of successfully completing degree requirements and pays particular attention to identifying and admitting students who excel academically. The College of Charleston serves a diverse student body from its geographical area and also attracts students from national and international communities. The College provides students a community in which to engage in original inquiry and creative expression in an atmosphere of intellectual freedom. This community, founded on the principles of the liberal arts tradition, provides students the opportunity to realize their intellectual and personal potential and to become responsible, productive members of society.

In addition to offering a broad range of baccalaureate degree programs, the College currently provides an increasing number of masters degree programs which are compatible with the community and the state. As a prominent component of the state's higher education system, the College encourages and supports research. Its faculty are important sources of
knowledge and expertise for the community, state, and nation. Additionally, the College provides an extensive credit and non-credit continuing education program and cultural activities for residents of the Lowcountry of South Carolina.
Approved by the Board of Trustees of the College of Charleston on July 14, 2006.

## Core Values

Educational Excellence that furthers intellectual, creative, ethical and social development through a broad range of programs centered on the liberal arts and sciences.
Student-Focused Community that embraces mutual respect, collaboration and diversity for the welfare of the individual and the institution.
The History, Traditions and Environment of Charleston and the Lowcountry that foster distinctive opportunities and relationships that advance our public mission in the city of Charleston, state of South Carolina, and the world.

## Academic Policies

## Note 1: In order to receive any correspondence from the Graduate School, students must have their current address on file with the Graduate School Office. Address update forms are available in the Graduate School Office or students may update their addresses on MyCharleston.

Note 2: All Graduate School business will be conducted via e-mail only through a student's CofC Cmail e-mail address. Students should set up a Cmail account upon acceptance to the Graduate School.
Note 3: Policies and calendars apply to all students, regardless of the mode of delivery of a course.

## Academic Dismissal

Maintaining an adequate GPA is only one criterion for satisfactory academic progress. Students receiving three grades below the grade of " B " or one grade of " F " in their programs will be withdrawn from the Graduate School and will not be allowed to reapply to their programs or to enroll in any graduate coursework counting toward any graduate degree or graduate certificate at the College of Charleston for one calendar year.

Because a grade of "unsatisfactory" is considered to be a failing grade and unsatisfactory completion of a program requirement, should a student earn a grade of " $U$ " in a thesis, research, or internship class, the student will be dismissed. A student has the right to appeal the decision to the Dean of the Graduate School and to re-apply to the program after one calendar year.

For M.A.T. students who earn a grade of "unsatisfactory" in Clinical Practice, a letter will be placed in the student's file indicating whether the student can attempt the clinical internship a second time. If the student is not allowed to attempt clinical internship a second time, the student will be removed from the degree program and will not earn an M.A.T. from the College of Charleston. The student will also not
receive a recommendation to the State Department of Education for certification.

Other criteria such as progress toward completing a thesis or requests for extensions of a program of study, etc., may be established by individual programs. Students who fail to meet the standards of their programs for satisfactory academic progress may be withdrawn from their programs.

## Academic Probation

Graduate students at the Graduate School are expected to maintain a cumulative grade point average (GPA) of 3.0 on a scale of 4.0 in their programs. Degree-seeking candidates and graduate certificate students whose GPA falls below 3.0 will be placed on academic probation. Students who are on probation must raise their averages to a satisfactory level (3.0 or better) upon attempting three additional courses in their program or within 1.5 academic years, whichever comes first. During the probationary period, students must also demonstrate that they are making progress by maintaining or improving their grade point averages.

Students whose averages remain below a 3.0 after attempting three additional courses or within 1.5 academic years after being placed on probation will be dismissed from the Graduate School and will not be allowed to reapply to their programs or to enroll in any graduate coursework counting toward any graduate degree or graduate certificate at the College of Charleston for one calendar year.

## Appeals

Students who have been removed from their graduate programs because of failure to resolve GPA or satisfactory progress issues may appeal these decisions in writing to the Dean of the Graduate School. Written appeals should contain all information pertinent to the issues with special circumstances clearly outlined. The Dean of the Graduate School, in consultation with the program directors, will decide on appeals and will inform students of decisions. Decisions of the Dean are final.

## Auditing Courses

Permission to audit a regular academic course must be received from the instructor teaching the course. This authorization will be given only if there is a seat available in the class. An audit must be declared no later than the end of the drop/add period; a student may switch from grade-to-audit status or audit-to-grade status only within the drop/add period.
An audit will be recorded on a student's permanent record at the Graduate School. Faculty may set attendance and/or other requirements for audit students; an audit may be revoked if the student does not comply with these requirements. Auditing forms are available from the Graduate School Office.

## Calendar Year Policy

The Academic Calendar at the College of Charleston is drafted by the Office of the Registrar and approved by the Office of Academic Affairs. The academic year is based on three major terms, fall, spring and summer. Fall and spring each has 14
weeks of class time and eight days for final exams. Each fall and spring term is also divided evenly into two express sessions, Express I and Express II. The summer term is divided into five parts of term entitled Maymester, May Evening, Summer I Day, Summer II Day and Summer Evening. Each full term or part of term class has meeting times configured and assigned for a minimum of 700 minutes per credit hour. The Academic Calendar is published online by the Registrar's Office at least a year in advance of a semester. The Academic Calendar can be viewed at http://registrar.cofc.edu/calendars/index.php. Calendars are effective for all students, regardless of the mode of delivery of a course.

## Certificate Students

Students pursuing a graduate certificate are required to meet the same academic requirements as those defined for degreeseeking students.

## Continuous Research Enrollment Course

Students who are nearing the end of their coursework for their degree and who have begun work on their master's thesis topic may need to utilize the Continuous Research Enrollment course (e.g. BIOL 900 or EVSS 900, etc.) to maintain a suitable level of enrollment for their programs. Continuous Research Enrollment is linked directly to students' research on a thesis topic and must be considered as a progress report toward that end when graded by the thesis advisor. The course will be graded on a pass/fail basis.
Students may not enroll in the course until a special approval form has been completed and all appropriate signatures have been applied. The special approval form is then submitted to the Graduate School Office for further processing. Continuous Research Enrollment hours cannot be used as part of a program of study towards a degree. Continuous Research Enrollment hours may not be taken in lieu of thesis hours, but may be taken in combination with thesis hours, if no additional hours are available.

## Concentration Policy

Some graduate degree programs offer enhancements to a student's program of study in the form of discipline concentrations or tracks. Concentrations that consist of fewer than 18 credit hours will not be listed on a student's transcript.

## Continuous Enrollment

A student who is in the process of completing a research or thesis project or is using library and laboratory facilities and consulting with College of Charleston faculty must maintain continuous enrollment in the program. Continuous enrollment can be maintained by enrollment in a minimum of one hour of graduate credit per semester, excluding Maymester and summer school. The continuous enrollment will entitle the graduate student to a valid ID card, full access to the Marlene and Nathan Addlestone Library, and such support from faculty
and facilities of the Graduate School as the student's program of study necessitates.

## Course Repetition Policy

It is the policy of the Graduate School of the College of Charleston that students may repeat up to six hours of independent study before requiring expressed permission of the student's program director and the Dean of the Graduate School. Continuous enrollment hours may be repeated up to a total of 12 hours.

A passed course (grade of "C" or better) may not be repeated for credit without expressed permission of the student's program director and Dean of the Graduate School. A subsequent registration will result in a drop. Students may repeat any course they have previously failed. The grade for the repeated course, as well as the failing grade, will be computed into the student's cumulative GPA and recorded on the student's transcript.
Scholarship students (academic and athletic), financial aid students, and veterans may repeat courses under this policy; however, they should check with the Departments of Financial Aid and/or Athletics to see how this will affect their eligibility.

Registration for repeated duplicate courses can only occur if the student's program director contacts the Director of Student Records at the Graduate School to give override permission into the class. The Director of Student Records of the Graduate School will process the override and register the student for the course.

## Full-Time/Part-Time Status

A full-time academic course load consists of nine enrolled graduate-level hours; a half-time course load consists of three enrolled graduate-level hours. Anything fewer than three hours is considered part-time status and is not eligible for financial aid.

## Grading System

Students may access their grades through http://my.cofc.edu. Students receive letter grades for every course in which they enroll. Each letter grade and its equivalent numerical quality point value are listed below. This grading system is determined by the level of the student - not the course.

## Grade Points/Grade

4.00/ A Superior
3.50/B+ Very good
3.00/B Good
2.50/ C+ Fair
2.00/ C Acceptable
0.00/F Failure
0.00/ I Incomplete
0.00/W Withdrawal
0.00/P Pass
0.00/S Satisfactory
0.00/ U Unsatisfactory
0.00/ XF Failure due to academic dishonesty

## "W" Grades

The grade "W" (withdrawal) is recorded if a student withdraws voluntarily from a course before the published date each semester. The "W" may not be awarded after this date except by special permission of the Graduate School, and only in those cases when continued enrollment in the course would be detrimental to the student's health or has been made impossible by circumstances beyond the student's control. Students wishing to withdraw after the regular withdrawal period must complete paperwork located in the Graduate School Office.

## "I" Grades

The grade "I" indicates that only a small part of the semester's work remains to be done, that the student is otherwise doing satisfactory work in the course, and that an extension of time is warranted to complete the work. The "I" also signifies that an agreement has been established between professor and student as to the quantity of work remaining to be done, the deadlines established for its completion, and a schedule of meeting times. This agreement must be made in writing with the professor, student, and program director having a copy. All work for completion of the course requirements must be submitted by the end of exams in the next major term (Fall or Spring). One additional extension may be granted to the student using the Course Requirement Completion Extension form with signatures of approval by both the professor and the Dean of the Graduate School. If the student does not complete the work within the prescribed time period, the "I" is changed to an " F " and the student will be withdrawn from the Graduate School and will not be allowed to reapply to his or her program or to enroll in any graduate coursework counting toward any graduate degree or graduate certificate at the College of Charleston for one calendar year.

## "XF" Grades

The grade of XF means failure due to academic dishonesty. If a student is found responsible for an act of academic dishonesty, the professor for that course must assign an XF. The XF remains on the student's official transcript for a minimum of two years. After two years, the student can petition the Honor Board for the removal of the X . The F will remain.

## Satisfactory Graduate GPA

Degree-seeking and certificate graduate students of The Graduate School of the College of Charleston are required to maintain a 3.0 grade point average (GPA) in their graduate coursework. In addition, some students may have specified GPAs for undergraduate coursework required by their graduate programs.

## GPA Calculation

The GPA is calculated on the basis of all graduate coursework identified in a student's program of study, as well as any additional coursework that is acceptable to the degree program. College of Charleston coursework taken prior to acceptance into degree-seeking status will not be used in the calculation of the student's GPA. Decisions concerning an academic action such as probation, academic dismissal and graduation will be based on the courses and GPA as described above.

## Graduation

Candidates for a graduate degree must submit an Application for Graduation to the Graduate School Office by the dates indicated on the academic calendar. If a candidate fails to complete his or her degree requirements, the graduation application must be canceled at least two weeks before the end of the semester. The application must be resubmitted in the semester the requirements are completed. Students must also pay a graduation fee at the time of submission or resubmission of the application. Fees may be paid at the Treasurer's Office. No bill will be sent. Students must be enrolled either in courses or in one hour of continuous enrollment in the semester in which they intend to graduate.

## DegreeWorks

DegreeWorks is an online degree audit application and academic advisement tool that provides a clear and convenient method to track degree progress. It is intended to assist students in reaching their academic goals and better understand degree requirements. DegreeWorks is designed to aid and facilitate academic advising, but is not intended to replace face-to-face advising sessions, the Graduate Catalog or the Graduate School. It also does not replace the program of study which all students should create with their Program Director or advisor.
Your degree audit is an unofficial check of the requirements you have completed and the requirements you have remaining. While unofficial, it should be an accurate reflection of your progress in meeting degree requirements. If you believe there is an error in your degree audit, it is your responsibility to print/screenshot a copy of your audit and contact the Graduate School and your Program Director. If you do not understand how to read your audit, please make an appointment to meet with your advisor.

## Leave of Absence

In order to request a leave of absence, a student must fill out the Graduate School's Request for a Leave of Absence and submit it to the Graduate School for approval by the Dean of the Graduate School. A student may not request a Leave of Absence or series of Leave of Absences that total more than two major semesters in an academic year. A student that has requested and been approved for a Leave of Absence need not reapply for admission to the Graduate School unless the student does not re-enroll at the end of the approved absence. A Request for a Leave of Absence for medical reasons should contain medical documentation. The Graduate School will notify the student and the student's Program Director regarding approval or disapproval of the requested Leave of Absence.

A Leave of Absence should be requested prior to the withdrawal deadline for the semester. Requests for a Leave of Absence that are filed after the deadline should provide an explanation of why the request was not submitted prior to the deadline. If a student requests a Leave of Absence after the withdrawal deadline, a Request for Withdrawal After the Deadline Form should be submitted with the Request for a

Leave of Absence. The student should drop any future courses that conflict with requested leave.
Students who request a Leave of Absence during the semester may be responsible for at least a portion of the tuition for the classes in which they are enrolled. Students should consult with the Treasurer's Office regarding the withdrawal fee schedule and requests for refunds.
The Graduate School will consult with the Dean of Students regarding requests for a Leave of Absence for psychological or behavioral health reasons. The Dean of Students may place a registration hold on the student and have certain conditions that must be met prior to the student's return to classes.

Important note for financial aid recipients: For purposes of an approved Leave of Absence under federal Title IV financial aid regulations, the student's Leave of Absence must not exceed a total 180 days, when added to all other Leaves of Absence in any 12 -month period. If a student who has received federal Title IV loans (Perkins, PLUS, and Ford Federal Direct Subsidized or Unsubsidized Loans) does not return from an approved Leave of Absence, some or all of the repayment deferral period may be exhausted, and loans may go into repayment. For purposes of the Title IV programs, the date of withdrawal is backdated to the first day of the approved Leave of Absence. This policy also includes students who do not return from an approved leave for study abroad. Federal student loan recipients who are considering a Leave of Absence are encouraged to visit with a financial aid counselor prior to applying for a leave of absence to review the impact of a leave on loan repayment.

## Student Grievances Procedures

Disputes may occasionally arise between members of the College of Charleston community over academic or nonacademic matters. While many issues can be resolved at the personal level between the two parties, a formal procedure is available for the resolution of disputes that cannot. The procedure that has been established presents a framework within which disputes may be settled. The formal procedure is not meant to change the character of a dispute but to ensure that all parties are treated fairly and that every attempt is made to arrive at a just resolution of the dispute.

If informal resolution between the student and professor is unsuccessful, the student should appeal to the program director. In cases where a resolution is unsatisfactory, the next step is to contact the Dean of the academic school. To appeal the decision of the dean (or associate dean), either party must present a written notice of appeal to the Dean of the Graduate School no later than five (5) working days from receipt of the written response from the (associate) dean of the school. The Dean of the Graduate School will further investigate the complaint and attempt to bring the parties to an agreed-upon resolution. His/her investigation may include interviewing and taking statements from all parties and others, reviewing documents and evidence previously compiled, securing additional documents and evidence from any available sources, and other actions which s/he deems necessary in the circumstances. The graduate dean may affirm, reverse, affirm in part, or reverse in part the decision of the (associate) dean
of the school. The graduate dean will promptly notify the parties, the faculty member's department chair or program director, and the dean of the school of his/her decision in writing.
Either party may appeal the decision of the graduate school dean by presenting a written notice of appeal to the executive vice president for academic affairs no later than five (5) working days from receipt of the decision by the graduate dean. A copy of the original written grievance and the decision appeal form should be attached to the notice of appeal. If the executive vice president for academic affairs determines that the notice of appeal has been filed in a proper and timely manner, $\mathrm{s} /$ he will promptly appoint an ad hoc College grievance panel as described below (see "College grievance panel composition") to consider the case. The executive vice president for academic affairs will notify the parties of the composition of the panel and will instruct the graduate school dean to forward all materials accumulated thus far to the panel chair, who will be designated by the executive vice president for academic affairs.

The appeal of the decision of the dean (or associate dean) of the school or dean of graduate studies may be on either procedural or substantive grounds and shall constitute a de novo determination of the issues. Within ten (10) working days after submission of the notice of appeal to the executive vice president for academic affairs, the student may submit to the executive vice president any additional evidence, including written affidavits and other items deemed pertinent to the issues. Within ten (10) working days of notification of an appeal, the faculty involved may submit to the executive vice president for academic affairs any additional evidence, including written affidavits and other items deemed pertinent to the issues. Those materials reviewed or considered by the panel in reaching a decision shall be made available to the parties for their inspection except where confidentiality is required by law.
The panel shall review all materials made available to it. It may also conduct its own investigation and secure further evidence it deems necessary in order to make a decision. It may hear live testimony if it wishes or may ask the parties to orally present their sides of the matter; both parties shall be given an opportunity to attend panel sessions called for these two purposes. Whenever the parties appear before the panel, they may be accompanied by an advisor or an attorney; such person may only advise and may not participate in the panel sessions or address the panel. Those materials reviewed or considered by the panel in reaching a decision shall be made available to the parties for their inspection.

The panel's decision will be sent in writing to the parties, the faculty member's department chair or program director, the dean of the school, the dean of the graduate school, and the executive vice president for academic affairs. The panel may affirm, reverse, affirm in part, or reverse in part the decision of the (associate) dean of the school or dean of the graduate school or may remand the case to the dean of the graduate school, the dean of the school, or to the faculty member's department chair or program director for a new and final attempt at informal reconciliation which, if it fails, may not be pursued further. If not satisfied with the panel's decision,
either party may, within three (3) working days of receipt of the decision, request that the executive vice president for academic affairs review the decision. If the Executive vice president decides that extraordinary circumstances exist justifying his/her review of the case, s/he will review all accumulated materials and may take any of the actions which were available to the panel. His/her decision will be final.

Any informal reconciliation which is reached at any level of these procedures will result in the purging of all formal records; all that will remain is a signed document setting forth the agreement.

## Non-Payment of Fees - Summer School

Students will be dropped from their enrolled courses for nonpayment of fees during summer terms. Students who have enrolled in summer classes, but who fail to attend, will be assessed a non-refundable $\$ 250$ fee per course for failure to officially drop or withdraw from a course.

## Non-Payment of Fees - Academic Year (Fall and Spring)

Students who have been dropped more than once from their classes for non-payment of fees after bills are due will have a hold placed on their account by the Treasurer's Office. At this point, the student must go to the Treasurer's Office to settle the bill before being put back in classes. Once the bill has been paid and the hold removed, the student must bring the receipt to the Graduate School Office. A staff member will then reenroll the student appropriately.

## Notice of Change

Rules, regulations, fees, course descriptions, and program requirements are subject to change without notice. When a change in program requirements is made while a graduate student is enrolled in the program, the student may elect to complete the program under the requirements in effect at the time of matriculation or to shift entirely to the new requirements. As a result of ongoing reviews of all graduate programs, certain course offerings may be deleted or restructured between editions of the Graduate Catalog. Students opting to adhere to the new requirements are required to complete a new Program of Study with their program director, and to submit the new Program of Study to the Graduate School.

## Thesis Requirements

A thesis is a permanent record of information gained through extensive study and research. It is the culmination of the student's efforts, coupled with those of his or her advisor and thesis committee.

The thesis reflects upon the credibility of all parties involved: the student, the advisor and committee, the School in which the student is enrolled, and the College of Charleston.
Because a thesis is a public document, archived in the College of Charleston library and available to the public as well as to
scholars worldwide, a high degree of consistency is necessary. Thesis regulations common to all programs include margins, fonts and disposition of copies. These common requirements can be found in the Graduate School's thesis guide, which can be viewed and downloaded at http://gradschool.cofc.edu. Documentation, length and other matters that are disciplinedependent will differ from field to field and will be found in individual master's program thesis guides.

## Time Limit Requirements

Each master's degree program limits the time in which candidates may earn their degree. The time begins with the date of a student's initial enrollment in graduate courses at The Graduate School of the College of Charleston, regardless of the admission category at the time of initial enrollment. All work credited toward the M.Ed. and M.A.T. degrees in education must be completed within six years. Marine biology candidates have four years to complete their degree. All other master's degree candidates must complete their degree within five years. Students who interrupt their studies, regardless of reason, are bound by the original time period. Extensions beyond the four-, five-, or six-year time period must be approved in writing by the program director and the dean of the Graduate School.

## Transfer of Credit

Master's candidates may transfer graduate credit taken from an institution accredited by a regional accrediting association to The Graduate School of the College of Charleston. The course must carry a minimum grade of " $B$ " and have been taken within six years of when the degree is conferred. Up to 12 credit hours may be applied to most master's degree programs.
The acceptance of transfer credit ultimately resides with the program director or admissions committee. Courses with grades of "S" or "P" are not transferable unless the student or department provides written documentation from the instructor(s) of the course, a department administrator, or the registrar at the transfer institution that the " S " or " P " graded course was equivalent to at least a B grade.
Credit earned at Charleston Southern University or the Medical University of South Carolina is not considered transfer credit so long as the master's candidate registers for the coursework using cross-registration procedures. Credit earned at The Citadel is not considered transfer credit so long as the course is part of a joint graduate program.
The student assumes responsibility for initiating the request for transfer graduate credit on a program of study. An official transcript containing the requested transfer work must be on file in the Graduate School Office. If such work is shown on the transcripts provided in support of the original admissions decision to the Graduate School, a new record is not needed.

## Withdrawing From Courses Or a Program

It is extremely important that any student withdrawing from a course either does so via MyCharleston during the regular
withdrawal period or with a form procured from the Graduate School Office after the regular withdrawal period. Students who wish to withdraw from the Graduate School must complete a program withdrawal form. These forms may be obtained from the Graduate School Office. If the student is withdrawing from classes as well, the procedure outlined above must be followed in addition.

## Admissions Policies

### 843.953.5614

## http://gradschool.cofc.edu/

In order to enroll in graduate-level courses, students must have received a baccalaureate degree from an accredited college or university and be admitted to some category of graduate studies at the Graduate School. Only students who have been formally admitted as degree-seeking, non-degree, provisional or transient students may enroll in graduate courses.
To be considered for admission to degree seeking, non-degree or certificate programs at the Graduate School, applicants must submit a completed Application for Admission, pay a non-refundable application fee, and submit official transcripts of all previous academic work. Additional admissions criteria may be required by individual programs. Applicants are responsible for ensuring that all materials are received by the Graduate School for the program to which they are applying.
The following policies are applicable to undergraduate, graduate, and all non-degree students:

## Financial Aid

Federal financial aid is only available to students in a degreeseeking status.

## Distance Education

Students who take courses via mixed modalities, including distance education and online courses, must meet all appropriate admission requirements. Admissions applications may be accessed and filed online or by mail, email, or fax.

## Risk Management Assessment

All applicants are required to answer questions relating to their criminal and disciplinary history, as outlined in College of Charleston, Policy 8.1.5, "Policy on admitting applicants for enrollment with a criminal or disciplinary history."

## Personal Information Protection

On-line applications are managed online by CollegeNET, Inc. in Portland, Oregon. A list of the firm's security FAQ and their security certification can be found on CollegeNET's website.

## Privacy and Security Policies

Information on the privacy and security policies governing applicants' personal information can be found online at http://policy.cofc.edu/documents/10.18.pdf and http://policy.cofc.edu/documents/11.1.pdf

## Admission Categories

## Degree-Seeking Student

A candidate's acceptance into a graduate degree program is based primarily upon his or her previous academic record. Admission decisions for the specific programs and degrees are made by the admission committee for each program. (See departmental statements in this catalog for requirements in specific programs.) An at-a-glance spreadsheet of admission criteria is available to interested graduate applicants through the Graduate School website.

The College of Charleston "seeks applicants capable of successfully completing degree requirements and pays particular attention to identifying and admitting students who excel academically." Every graduate program has its own admissions committee that reviews every application, utilizing commonly accepted practices in reviewing graduate applications. Each committee takes a holistic approach in considering not only test scores and GPA but also academic writing samples, personal statements and letters of recommendation in completing the decision process. "The College of Charleston serves a diverse student body from its geographical area and also attracts students from national and international communities." This excerpt from the College's mission statement embodies the overarching goals in graduate admissions processes and policies.
Upon acceptance as a degree-seeking student, each applicant is sent an acceptance letter, an acceptance-of-offer form, a New Student Checklist, and a link to our health form. These forms must be completed and sent to the offices indicated on the forms. Students are also assigned a graduate advisor to assist in developing their plan of study. Consult your advisor prior to enrolling in courses to ensure they will count toward your degree.
All programs for the Master's Degree at the College of Charleston require a minimum of 30 semester credit hours of graduate-level work directly related to the discipline and which may not include Continuous Research Enrollment hours. See program details for specific requirements. See Continuous Research Enrollment, under Academic Policies, for more information about Continuous Research Enrollment hours.
Important note: If you have been accepted for a specific term and wish to defer initial enrollment, you will need to receive the program director's written approval specifying the new start date. This must be received before the first day of classes for the term in which you were originally accepted. If written approval is not received, you will need to reapply to the program.

## Graduate Certificate Student

The graduate certificate is not defined as a degree by the Graduate School, rather, it is a focused collection of courses that, when completed, affords the student some record of coherent academic accomplishment in a given discipline or set of related disciplines. Moreover, the graduate certificate is not viewed as a guaranteed means of entry into a graduate degree program. While the courses comprising a graduate certificate may be used as evidence in support of a student's application for admission to a graduate degree program, the certificate
itself is not considered to be a prerequisite. Graduate certificate students should note that they do not meet the eligibility requirements for financial aid.

## Non-Degree Student

Non-degree students are those who desire registration with credit in graduate courses but are not candidates for a degree or certificate program. Applicants seeking acceptance as nondegree status need to file the regular application for admission and submit the required application fee and transcripts. Depending upon the program, between 6 and 12 credit hours of work taken in non-degree status may be applied toward degree requirements if the student is later admitted to a degree program. In order to accomplish reclassification as a degreeseeking student, the candidate must submit all materials prescribed by the appropriate admission committee. For nondegree students reapplying for degree-seeking status within one calendar year of the original non-degree application, the fee for the degree-seeking application will be waived. Contact the Director of Graduate Admissions for more information.
Applications for non-degree status must be reviewed by the admissions committee for each program, except education (see next paragraph). All non-degree students are admitted for one semester or term only, and must request an extension in writing if they desire to continue beyond the first semester. Extensions may be granted up to one calendar year from the first application; after one calendar year, a non-degree student must re-apply to be considered for further coursework.
Applications for non-degree status in education are reviewed by the Graduate School Office, and must be accompanied by a copy of a teaching certificate.
All students who take courses via mixed modalities, including distance education courses, must meet all appropriate admission requirements. Admissions applications may be accessed online and filed online or by mail, email, or fax.

## Provisional

A provisional student is one who does not meet all the admission criteria, but in the judgment of the appropriate program admission committee, has the potential to successfully complete graduate work. The student's application as a degree-seeking student will be reconsidered after the student has met the provisional status stipulations. Provisionally admitted students are not eligible for Federal financial aid.

## Professional Development for Certified Teachers

Certified educators can enroll in professional development courses through the School of Education, Health and Human Performance Office of Professional Development in Education (OPDE). These courses, known as Professional Development Courses (EDPD) are used to modernize instructional strategies and offer content enrichment opportunities while leading to recertification points and pay scale advancements. These Professional Development credits offered through OPDE do not count toward the completion of an advanced degree such as the Master of Education or Master of Arts in Teaching. For more information regarding professional development courses, contact the OPDE Office at 843.953 .7651 .

Please note that EDPD courses differ from Catalog Courses. A Catalog Course has been approved as part of a course of study in a College of Charleston graduate-level program. These courses are ones that are offered through a contract course arrangement and count towards a master's degree in a specific discipline area (i.e.: M.A.T. and M.Ed. programs). They are awarded graduate credit, reviewed, and accepted by the specific discipline/curriculum involved.

## Senior Citizens

South Carolina residents 60 years or older are eligible to take courses for a nominal registration fee. In order to do so, you must:

- Be accepted into a graduate program
- Bring proof of your age to the Graduate School
- Complete the Senior Citizen Tuition Addendum found on the Admissions website
- Register for your classes no earlier than the first day of classes for the semester in which you intend to enroll


## Transient or Visiting

A student in good standing in any regionally accredited graduate school who wishes to enroll in graduate courses for credit for the purpose of transferring this credit to his or her graduate school may be admitted as a transient or visiting graduate student. This admission is valid for only one semester or one summer session but may be renewed any number of times upon reapplication. No transcripts are required for transient student enrollment, but a letter from the graduate dean of the home institution certifying student in good standing status must be provided. Transient/visiting students must also complete an application form and pay the application fee.

## International Students

International applicants, being defined as anyone applying who is not a citizen of the United States, regardless of present residence, are required to provide documentation in addition to that required by each program. These documents include but are not limited to:

1. A copy of their current visa, when appropriate.
a. An H-type or J-type visa
b. A permanent residency card
c. Documentation from the U.S. Department
regarding progress towards either a permanent residency card or naturalization proceedings.
2. An official copy of their transcripts.
3. An evaluation of all non-U.S. transcripts from an approved evaluation service. The list of approved services include:
a. Global Credential Evaluators, Inc.
b. Lisano International
c. World Education Services, Inc.

This requirement may be waived for foreign
institutions that have a special relationship with a program at the College of Charleston.
4. An official copy of the applicant's TOEFL or IELTS scores. This requirement may be waived for:
a. Applicants from countries where English is the first language, such as the U.K. or Australia
b. Applicants who received their degree from or have attended a U.S. university for at least one year. Grades received at the U.S. institution will have an impact on the decision to
waive the TOEFL or

## IELTS score.

5. Applicants seeking an F-1 visa must provide certificate of finances that gives specific information on their ability to meet the financial demands of tuition, fees, and cost of living at the College of Charleston. The documentation to be provide includes:
a. The certificate itself, completed and signed appropriately by all involved parties.
b. Bank statements, wage statements, and/or letters from the bank confirming the ability of the applicant to pay.
Note: In some cases, a sworn affidavit of support or notarized bank officer's statement is sufficient. In certain countries, United States Consular officers require prior payment of the first-year tuition and fees before a non-immigrant student visa will be issued. Applicants should inquire about local practices in advance in order to establish their graduate study plans.

## Academic Dismissal-Re-admission Process

Students who have been academically dismissed may apply for readmission after one calendar year, with the following conditions:

1. The student will provide a new statement of goals, which will address the issues that led to the dismissal, and the student's plan to avoid further academic issues.
2. The program director and admissions committee, after approving the application for re-admission, will provide the student with an acceptance letter that provides specific parameters that must be met for successful completion of the student's program.
a. The specific courses required by the student to finish.
b. The specific grades that must be achieved in order to maintain a 3.0 GPA.
c. A timeline for the completion of the program.
3. If the student is re-admitted to the program, he/she must meet with the program director and the associate dean of the Graduate School to review their acceptance letter, which must then be signed by all three participants in the meeting.
4. If a re-admitted students fails to meet the parameters of their re-admission, it is at the discretion of the program director to remove the student permanently from the program.

## Applying to the Graduate School

Admissions requirements for each graduate program differ; it is highly encouraged to review the requirements found on the Graduate School website at http://gradschool.cofc.edu.
All admissions materials can be submitted to gradadmissions@cofc.edu or mailed to:
The Graduate School
College of Charleston
66 George Street

Randolph Hall, Suite 310
Charleston, SC 29424
Once your complete application has been received, and you have been accepted into a program, you may then enroll in graduate-level courses.

## Application Deadlines

Note: Application deadlines may be updated without notice. For current information, please visit our website (http://gradschool.cofc.edu/applyingtograduateschool)

## Master Degree Programs

## Accountancy:

Fall: July 1
Spring: See Program Director
Summer: April 1

## Business Administration:

April 1

## Communication:

Fall: March 1
Spring: Oct 1

## Computer \& Information Sciences:

Fall: June 1
Spring: November 1
Summer: April 1

## Early Childhood Education:

Fall: April 1
Spring: November 1

## Elementary Education:

Fall: April 1
Spring: November 1

## English:

Fall: May 1
Spring: November 1
Summer April 1

## Environmental Studies:

Fall: March 1
Spring: November 1

## Historic Preservation:

February 15

## History:

Fall: March 1
Spring: October 15
Summer: March 1

Languages:

Fall: June 15
Spring: November 15

## Marine Biology:

Fall: February 1
Spring: November 1

## Mathematics:

Fall: July 1
Spring: November 1
Summer: April 1

Middle Grades:
Fall: April 1
Spring: November 1

## Performing Arts (music education):

Fall: July 1
Spring: November 1
Summer: April 1

## Public Administration:

Fall: June 1
Spring: November 1
Summer: April 1

## Science \& Mathematics for Teachers:

Fall: July 1
Spring: November 1
Summer: April 1

## Special Education:

Fall: April 1
Spring: November 1

## Teaching Learning and Advocacy:

Fall: July 1
Spring: November 1
Summer: April 1

## Dual Program in Environmental Studies and Public Administration:

Fall: March 1
Spring: November 1
Summer: March 1

## Graduate Certificate Programs

Graduate students who are currently enrolled in a graduate program of study leading to a degree, and who wish to pursue a simultaneous graduate certificate within the Graduate School must apply to the certificate program before the last semester of their degree program. The Dean of the Graduate School, upon request by the certificate program coordinator, may grant exceptions to this policy. The application fee will be waived by the Graduate School for currently enrolled students.

Students currently in a certificate program who wish to change their status to degree-seeking must apply to their program of choice. If they are currently-enrolled certificate students at the time of their application, they may request an application fee waiver based on their status as a current student. Materials required by the certificate application process may be included in the master's application package; the certificate student must supply any additional materials required by the degreeseeking program.

## Arts Management:

Fall: June 1
Spring: November 1
Summer: April 1

## English to Speakers of Other Languages:

Fall: April 1
Spring: November 1

## Gifted and Talented:

Fall: July 30

## Operations Research

Fall: July 1
Spring: November 1
Summer: April 1

## Special Education:

Fall: April 1
Spring: November 1

## Statistics:

Fall: July 1
Spring: November 1
Summer: April 1

## Urban and Regional Planning:

Fall: June 1
Spring: November 1
Summer: April 1

## Non-Degree Education Applicants

Fall: Rolling
Spring: Rolling
Summer: Rolling

## International Applicants

If your program of interest has a deadline that falls prior to those stated below, you must abide by the program deadline.
Fall: April 1
Spring: August 1
Summer: January 1

## General Entrance Examinations

All master's degree programs at the College of Charleston require an entrance examination. The two main exams accepted are the Graduate Record Examination (GRE) and the Graduate Management Aptitude Test (GMAT); please refer to your program of interest to understand which examination is required for acceptance to that program. The results of these examinations are valid for up to five years. The College of Charleston will not consider examination results older than five years for entrance into a graduate program. For more information regarding the GRE or GMAT, please refer to www.ets.org/gre or www.gmac.com/gmac/thegmat for their respective websites.

## Health Requirements

Prior to registering for classes, newly admitted students to the College of Charleston are required to demonstrate immunity or proof of vaccination for measles, rubella, mumps, polio, tetanus, and diphtheria. Also required is documentation of TB skin test taken within a year. Other recommended but not required immunizations include the chicken pox vaccination, if never exposed, the meningitis vaccine, and the Hepatitis B vaccination series for young adults. Individuals born prior to 1957 have additional requirements which are outlined in the health form provided in the acceptance packet. The health forms collected by the Student Health Services ensure the optimum health of students on campus and are absolutely confidential. These forms do not affect admissions decisions.

If questions arise with complying with this policy, or in obtaining adequate vaccinations, please call Student Health Services at 843-953-5520. Please return the completed forms to:
Student Health Services
181 Calhoun Street
Charleston, S.C. 29424

## Orientation

All new graduate students are invited to an Orientation Social held on the first week of class. New students will have the opportunity to meet the Graduate School staff as well as students and faculty from their program and from others at Orientation. In addition to meeting new people, the Orientation Social provides new students with the chance to ask questions of the staff and faculty about other resources available for their use on campus. Invitations are sent to accepted students six weeks prior to the start of the semester in which they enroll. More information about Orientation, including a checklist for all new students, can be found on the Graduate School's website under Current Students.

## Post-Admission Policies

All students of the College of Charleston are responsible for familiarizing themselves with the policies that pertain to their course of study. Policies include, among others, those within this Catalog, the Student Code of Conduct, and the Handbook on Non-discrimination and Harassment. The Graduate School of the College of Charleston reserves the right to change the
schedule of classes and cost of instruction at any time within the student's term of residence; statements within this Catalog should not be regarded as irrevocable contracts between the student and the institution. Students are also responsible for staying informed of individual program academic policies. We recommend that students remain in contact with their program director and the Graduate School regarding any policy changes.

## South Carolina IIlegal Immigration Reform Act

Section 17 of the South Carolina Illegal Immigration Reform Act (codified at S.C. Code Ann. §59-101-430) requires South Carolina public colleges and universities to verify the lawful presence in the United States of their students. To attend a public college or university in the State, a student must be a citizen or national of the United States or an alien lawfully present in the United States.
All College of Charleston students are required to document lawful presence in the United States before being allowed to enroll or continue enrollment at the College. The Board of Trustees of the College of Charleston has approved a verification policy to comply with the law.
Students who are not initially verified as being lawfully present in the United States will receive written notification of that initial finding. To change that initial finding the student will be required to present proof of lawful presence as listed in the College's standard form entitled Verification of Lawful Presence in the U.S. that will accompany such notification.
You may direct questions about the College's policy and procedures regarding this matter to the Office of the Registrar, 160 Calhoun Street, Lightsey Center, room 281. You may also contact this office by phone at 843-953-5668 or send email inquiries to lawfulpresence@cofc.edu.

## Unofficial Transcripts

The Graduate School may accept unofficial transcripts from applicants, however all official transcripts must be received prior to enrolling in the first course. The Graduate School reserves the right to rescind any offer of admission when there is a material discrepancy between the transcript uploaded into the application and the official transcript received from the issuing institution. Please take note that it is unlawful in South Carolina for any person to falsify or alter a transcript, a diploma, or the high school equivalency diploma from any high school, college, university, or technical college of this State, from the South Carolina Department of Education, or from any other transcript or diploma issuing entity. It is also unlawful for any person to use in this State a falsified or altered transcript, diploma, or high school equivalency diploma from the South Carolina Department of Education, or from any in-state or out-of-state high school, college, university, or technical school, or from any other transcript or diploma issuing entity with the intent to defraud or mislead another person. (South Carolina Code of Laws § 16-13-15).

## Tuition and Fees

Treasurer's Office<br>843-953-5572<br>www.treasurer.cofc.edu

## Auditing

Persons wishing to audit regular academic courses at the College must pay any special course fees and full per-credithour costs.

## Basic Fees, Expenses and Additional Charges

As a state-affiliated institution, the College of Charleston bases its fees in part on appropriations granted by the South Carolina General Assembly. Accordingly, the fees charged by the College will be directly affected by the action of the legislature and are therefore subject to change without notice.

All fees are due and payable in full before or on the due date shown on the first bill for the semester. Cancellation of a student's registration will occur if payment is not received timely. Registration and transcript holds are placed on all students with unpaid balances. Diplomas and transcripts are not issued until all college accounts have been paid in full.

## Billings Procedures and Methods of Payment

The bills for tuition and fees are accessible by visiting MyCharleston at http://my.cofc.edu at all times. All bills are delivered to students through their Cmail email account; bills are not delivered to students' physical addresses. Visit the Treasurer's Office for more information regarding the payment of bills at treasurer.cofc.edu.

## Legal Residency for Tuition and Fee Purposes

843.953.7312
http://legalresidency.cofc.edu
Rules regarding the establishment of legal residence for tuition and fee purposes for institutions of higher education are governed by Title 59, Chapter 112 of the 1976 South Carolina Code of Laws, as amended. The guidelines for residency determinations for fee and tuition purposes are governed by South Carolina Code of Laws and South Carolina Commission of Higher Education regulations.

## Financial Assistance

Title IV School Code: 003428
843-953-5540
http://finaid.cofc.edu
financialaid@cofc.edu

## Satisfactory Academic Progress (SAP)

SAP Policy for Financial Aid Eligibility

All federal financial assistance programs are authorized under Title IV of the Higher Education Act of 1965 as amended, and require the establishment of minimum standards of academic progress that students must meet to maintain general eligibility for financial aid. While students meeting these standards are generally eligible for aid, some aid programs require higher standards that may preclude the student from qualifying for those programs.
The College of Charleston Satisfactory Academic Progress (SAP) Policy for Financial Aid Eligibility applies to all aid programs administered by or through the Office of Financial Assistance and Veterans Affairs. These standards apply to all students seeking or receiving assistance, whether or not aid may have been received previously. All students must be admitted to and eligible to enroll in an approved degree program of study. Non-degree students are not eligible for federal and state aid programs.
Qualitative Standards: Graduate students must maintain a cumulative grade point average of at least 3.0. Students with a GPA of less than 3.0 are not eligible to receive financial aid.

Incremental Quantitative Standards: Graduate students must successfully complete $50 \%$ of the cumulative hours attempted. The incremental assessment is performed after grades are posted at the end of each spring semester.

Time Limitation Quantitative Standards: From the date of first enrollment in a specific degree program, students seeking a master's degree must complete all degree requirements (including research and thesis) within five years.

## General SAP Policies and Procedures

Withdrawal: Any student withdrawing from coursework will be evaluated based on the minimum number of credit hours attempted at the point of aid disbursement, e.g., a student enrolled in 18 hours and withdraws from 6, the evaluation is based on 12 hours. Anything less than 12 hours will have an adverse effect.

SAP Probation: Students who do not meet the SAP standards minimum grade point average and/or have not completed the required percentage of hours will be placed on SAP probation for the next incremental assessment period (one 12-month period beginning with Maymester). Students placed on probation are encouraged to meet with their academic advisor to develop a plan for making up deficiencies within the next incremental assessment period.

Termination of Aid: Students who are dismissed from the College of Charleston for any reason are terminated from financial aid. Students who do not meet the SAP standards for financial aid eligibility as of the end of the SAP probation period will be terminated from financial aid until they are again in full compliance.

Reinstatement of Aid: Students who are terminated from financial aid may submit an appeal for reinstatement of eligibility when they have mitigating circumstances beyond their control, which have resulted in deficiencies that could not be made up while on SAP probation. Such circumstances include the student's injury or illness, death of a relative, or other special circumstances. In cases where the student and/ or student's family lives in an area that has been officially declared a national disaster area, an appeal may be filed.

Appeal forms for reinstatement of eligibility are available from the Office of Financial Assistance and Veterans Affairs' website at www.finaid.cofc.edu. Appeals for reinstatement of eligibility are the responsibility of the student. The appeal must be submitted within the published calendar of appeal and include the term for which reinstatement is requested. Appeals must specifically reflect the unique circumstances that were beyond the control of the student. The appeal should provide specific resolution to circumstances and supporting documentation as indicated on the appeal form.

Students appealing for reinstatement of eligibility remain ineligible to receive aid, but may pursue participating in the College of Charleston Semester Installment Payment Plan (not available in summer) through the Treasurer's Office. Students should be prepared with other resources to pay all educational expenses not covered by the payment plan. Students whose appeals are approved may have their eligibility for aid reinstated. Financial aid may be awarded if the student meets routine eligibility criteria, subject to availability of funds. The College of Charleston's satisfactory academic progress policy for financial aid eligibility complies with the Higher Education Act of 1965, as amended, federal regulations found in Section 668, 690, and applicable DCL GEN 96-10, 96-18, et al.

## SAP Appeals Calendar

Summer: Students appealing eligibility for this period must have submitted an appeal by the first weekday in June.

Fall and Spring: Students appealing eligibility for the academic year may submit an appeal from the second Monday in May until the last weekday in August. Students who are making up hours from the previous academic year in Maymester and summer sessions are strongly encouraged to appeal for the fall semester after summer grades are posted on MyCharleston.

Spring: Students appealing for the spring semester only may submit an appeal from the first weekday in January until the last weekday in January.

## Return of Title IV Funds Policy

The Return of Title IV Funds Policy (federal student financial aid programs) was implemented at the College of Charleston in Fall 2000. Federal regulations require each educational institution to have a written tuition and fees refund policy (see "basic fees and expenses") and a return of Title IV funds policy to be applied to students who withdraw during a term for which aid has been received. The Return of Title IV Funds Policy applies only if the student completely terminates
enrollment (i.e., cancels his/her registration, withdraws, or is dismissed) or stops attending classes before completing more than 60 percent of the enrollment period.
The amount of Title IV aid that a student must repay is determined in accordance with the federal formula for return of Title IV funds as set forth in Section 484B of the Higher Education Act. This law also specifies the order of return of the Title IV funds to the program from which they were awarded.
A repayment may be required when aid has been credited to a student's account from financial aid funds in excess of the amount of aid the student earned during the term. The amount of Title IV aid earned is determined by multiplying the total Title IV aid (other than federal work study) for which the student is qualified by the percentage of time during the term that the student was enrolled. If less aid was disbursed than was earned, the student may receive a late disbursement for the difference. If more aid was disbursed than was earned, the amount of Title IV aid that must be returned (i.e., that was unearned) is determined by subtracting the earned amount from the amount actually disbursed.
The responsibility for returning unearned aid is allocated between the College of Charleston (CofC) and the student, according to the portion of disbursed aid that could have been used to cover CofC charges and the portion that could have been disbursed directly to the student once CofC charges were covered. CofC will distribute the unearned aid back to the Title IV programs as specified by law. The student will be billed for the amount the student owes to the Title IV programs and any amount due to CofC resulting from the return of Title IV funds used to cover charges.

## U.S. Department of Education Consumer Service Office

For information and/or clarification on prior loans once they go into repayment. http://ombudsman.ed.gov.

## Students' Rights and Responsibilities

By enrolling in courses at The Graduate School of the College of Charleston, students accept the responsibility to adhere to its regulations and codes. The academic and non-academic policies of the Graduate School are intended to promote honorable citizenship and a positive living and learning environment sensitive to the rights of others and the achievement of knowledge. Our expectations neither advocate the surrender of basic constitutional rights nor dilute those rights, but strengthen and complement the rights of each individual enrolled.
It is in the spirit of good citizenship and community stewardship that specific rights and responsibilities are detailed in the Student Handbook: A Guide to Honorable Conduct. The handbook is available at http://studentaffairs.cofc.edu/honor-
system/studenthandbook/index.php. It is the responsibility of
all students to become familiar with the academic and conduct regulations that govern eligibility to continue at the graduate school.

## Confidentiality of Student Records (FERPA)*

The Family Educational Rights and Privacy Act of 1974 is a federal law designed to provide students with greater access to and control over information contained in their educational records while at the same time prohibiting, in most circumstances, the release of any information (other than directory information) contained in those educational records without the expressed and written consent of the student. This law guarantees privacy of student records, open access by students to their records, restricted release of information to specified authorities or others only with written consent, and procedures allowing students to challenge the contents of their records. Forms necessary for release of information or restriction of directory information are provided by the Office of the Registrar. Each campus department may require a signed release specifying the type of information to be released and to whom. School officials may not disclose personally identifiable information about students, without written permission of the student, unless such action is covered in the exceptions permitted by the ACT. For the list of exceptions, please refer to FERPA on the website of the Office of the Registrar.
The Graduate School of the College of Charleston designates the following categories of student information as public, or "Directory Information." (The graduate school may disclose such information at its discretion unless a student has filed a request with the Office of the Registrar to prevent its disclosure.) Name, local address, permanent address, telephone number, campus e-mail address, date and place of birth, dates of attendance, current enrollment, photographic images, past and present participation in officially recognized sports and activities, including fraternities and sororities, and physical attributes (e.g., height and weight) of athletic team members. Please refer to the registrar's website at http://registrar.cofc.edu/ for additional information on FERPA and the disclosure of educational records.

## College of Charleston English Fluency Policy*

Under the provisions of the 1991 English Fluency in Higher Education Act, the South Carolina Legislature has mandated that each public institution of higher learning establish a mechanism to "ensure that the instructional faculty whose second language is English possess adequate proficiency in both the written and spoken English language." Additionally, the act requires that the institutions "provide students with a grievance procedure regarding an instructor who is not able to write or speak the English language."
*Policies and procedures in their entirety may be found in the Student Handbook: A Guide to Honorable Conduct, accessible through the college's website.

## Campus Resources

Avery Research Center<br>\section*{843-953-7609}<br>http://avery.cofc.edu

The Avery Research Center for African American History and Culture, located at 125 Bull Street, is an archive and museum that has been established to document, preserve, and make public the unique historical and cultural heritage of African Americans in South Carolina and the Lowcountry.

## Center for Disability Services (CDS)

### 843.953.1431

843.953.8284 (TDD)

## http://disabilityservices.cofc.edu

The College of Charleston actively and affirmatively seeks to accommodate any currently enrolled student with a documented disability in compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 and its 2008 amendments. Upon admission, students whose disabilities would require accommodations are urged to apply for services by contacting CDS before the semester begins.

## Center for Student Learning (CSL)

### 843.953.5635 <br> http://csl.cofc.edu

The Center for Student Learning offers academic assistance to all students. Conveniently located in the Addlestone Library, the Center is composed of walk-in accounting, foreign languages, math, speaking, and writing labs, providing students with tutorials and consultations with trained and experienced staff, faculty, and peer tutors. In addition, tutoring is available by appointment in selected introductory courses not served by walk-in labs. Supplemental Instruction group sessions are offered in selected courses. Study skills assistance is offered by appointment and through weekly workshops.

## Libraries

## Marlene and Nathan Addlestone Library <br> 843-953-5530 <br> http://library.cofc.edu

The Marlene and Nathan Addlestone Library, the main campus library, home to the Student Computing Support Desk and a Student Technology Center. The library holds more than 3,200 print journals, and 29,000 electronic journals. Students will find helpful library staff ready to assist with papers, projects and assignments. Graduate students have their own study room on the third floor of the library, too.

## Area Library Resources

College of Charleston graduate students also have access to the library facilities of the following institutions:

- Charleston Southern University
- The Citadel
- Medical University of South Carolina
- The Berkeley, Main and Palmer campuses of Trident Technical College

Students may also use the facilities of the following neighborhood libraries, subject to the policies of each institution:

- Charleston County Library
- Charleston Library Society
- S.C. Historical Society


## Marine Resources Library

843-953-9370
http://mrl.cofc.edu/
The Marine Resources Library at Fort Johnson houses the extensive marine science holdings of the College of Charleston, the South Carolina Department of Natural Resources Marine Resources Division and NOAA/NOS/CCEHBR/Charleston Laboratory.

## International Education and Programs

## 843-953-7661

http://international.cofc.edu/
The Office of International Education and Programs provides assistance to international graduate students with visas and related immigration and naturalization concerns. The office also serves as a resource center for students interested in studying abroad. The office is located in the Multi-cultural Center at 207 Calhoun Street.

## Office of the Registrar

## 843-953-5668

http://registrar.cofc.edu

## Transcripts

Please see http://registrar.cofc.edu/transcripts/index.php for the most updated information on transcripts.

## Department of Information <br> Technology

## 843-953-5595

http://it.cofc.edu
The Division of Information Technology works collaboratively across the College of Charleston campus to provide information management and technology solutions. Its primary office is located on the fifth floor of the Bell South Building at 81 St. Philip Street. Visit their website to learn about CWID, CMAIL, MyCharleston, and a Cougars Account. This division also assists students with the purchase and support of computer hardware and software.

## Graduate Degrees

## Master of Science in Accountancy

Roger Daniels<br>Program Director<br>843.953.8041<br>danielsr@cofc.edu

## http://sb.cofc.edu/graduate/accountancy

## Mission Statement

To foster in our graduate students an appreciation for the constructs underlying the accounting profession while developing technical skills and knowledge required for leadership in the accounting profession.

## Program Description

The School of Business offers a Master of Science degree in Accountancy. The School of Business is accredited by AACSB, The Association to Advance Collegiate Schools of Business. In addition, both the graduate and undergraduate accounting programs are separately accredited by AACSB. Our accounting program is one of approximately 170 programs internationally to have earned separate accounting accreditation.

The graduate accountancy program is designed to prepare students for careers in financial reporting, internal or external auditing, taxation, and managerial decision making within public accounting firms, private industry and governmental entities. Students may choose one of three tracks including financial reporting and assurance, taxation or generalist.

## Minimum Admission Requirements

In general, a student seeking admission into the graduate program should meet the following requirements:

- A minimum GMAT score of 530
- Overall undergraduate GPA of 3.0
- Undergraduate Accounting GPA of 3.0
- Two letters of recommendation
- Internet-based TOEFL of 100 or higher (international applicants only)


## Required Undergraduate Courses

The following undergraduate courses are required for the graduate program. All required undergraduate courses should be completed prior to enrolling in graduate courses. Any exception requires permission of the graduate program committee.

## Accounting:

- Principles of Accounting
- Intermediate Accounting I \& II
- Accounting Information Systems
- Cost Accounting
- Federal Income Tax
- Auditing


## Business and Economics:

- Macroeconomics
- Microeconomics
- Organizational Behavior
- Marketing Concepts
- Business Finance
- Legal Environment of Business
- Statistics


## Degree Requirements

A total of thirty (30) credit hours at the graduate level must be successfully completed to earn the Master of Science in Accountancy. At least eighteen (18), but up to thirty (30), of those hours must be in graduate level accountancy courses. Electives may be taken in Business Law and Finance. Graduate courses may not be transferred from other institutions.

## Required Courses:

ACCT 500 Accounting Theory
ACCT 599 Contemporary Accountancy Issues

## Professional Tracks

In addition to the two required courses, students in the program can select one of three tracks (Financial Reporting and Assurance, Taxation, and International) and complete the degree requirements for that track. Any track consisting of fewer than 18 credit hours will not be listed on a student's transcript.

## Financial Reporting and Assurance Track

The Financial Reporting and Assurance Track provides students with the advanced knowledge and skills necessary for entry-level positions in the areas of auditing, other assurance services, and financial reporting.

## Taxation Track

The Taxation Track provides students with the opportunity to study tax planning/strategy as well as compliance with various aspects of tax law in preparation for entry level positions with public accounting/consulting firms and corporate entities.

## International Track

The International Track provides students a broadened, global perspective for students in the context of their intended area of practice and is supplementary to the curriculum undertaken in the main tracks (Financial Reporting and Assurance Track and

Taxation Track). In addition to participation in the European Study Abroad program (ACCT 570 and ACCT 575), students will explore an international dimension in each of their theses undertaken in ACCT 500 and ACCT 599, and complete BLAW 509.

## Electives:

Beyond the two required accounting courses (ACCT 500 and ACCT 599), students will select elective courses that are appropriate for their individual track. At least eighteen (18) graduate hours of accountancy courses are required for the degree. Students may work with individual faculty members to develop an Independent Study in Accounting (ACCT 520) that bears to the student's intended area of practice.

Study Abroad Courses (ACCT 570 and ACCT 575) are offered during the summer sessions and provide students with the opportunity to earn six hours of graduate accountancy credit while studying in Europe. Study Abroad course offerings are conditional upon sufficient student demand.

Immediately following their admission to the program, each student will meet with the Program Director to develop a plan of study, including the appropriate elective courses for their track. Electives may vary from year-to-year, based upon available faculty and student interest.

## Accountancy Course Descriptions

## ACCT 500 Accounting Theory (3)

A required seminar course that explores the rational and structure of accounting theory including the concepts underlying current accounting thought. Students will conduct research and complete a thesis that bears to their intended area of practice that facilitates a broadened perspective by exploring relative technical constructs in a theoretical context. (Required)

## ACCT 507 Accounting Information Systems (3)

This course is designed to provide the graduate accounting student with a broad conceptual and practical knowledge of accounting as an information system. The focus is information and its decision usefulness to managers, investors, creditors and other interested parties. Particular attention is paid to human beings as information processors, the systems development life cycle, the decision process, internal control structure and applications to the business environment.

## ACCT 508 Management Accounting (3)

This course examines the use of cost data in management planning, performance evaluation, and decision making. The behavioral implications of management accounting reports and the use of quantitative models are also covered.

## ACCT 509 Advanced Auditing Concepts (3)

Various strategic and ethical aspects of external auditing are examined in this course. The focus is on current issues facing the auditing profession with an emphasis on the challenges facing the audit practitioner in the foreseeable future.

## ACCT 510 Internal Auditing and Forensic Accounting (3)

This course examines current theory and practice of internal auditing viewed as a component of organizational governance. The effectiveness of various internal audit activities will be evaluated with an emphasis on the role that the internal audit function should play in detecting fraud.

## ACCT 515 History of Accounting Thought (3)

The evolution of accounting thought from the ancient through the post-modern period is examined. Accounting as a social phenomena is studied historically in its relevant economic and political contexts. Western and non-Western historical traditions frame the study of accounting's role in the transformation of societies and economies and its importance in the development of social institutions.

## ACCT 518 Financial Case Analysis (3)

Generally Accepted Accounting Principles-based issues that relate to real-world accounting cases are covered. The objective is to facilitate the understanding of GAAP and its application to business problems. The consequences of GAAP interpretations on the independent audit function and the interrelationships of GAAP and GAAS in the financial reporting environment are examined.

## ACCT 520 Independent Study in Accounting (1-3)

Individual study of a given accounting topic to be defined by the student in consultation with the instructor.

## ACCT 531 Advanced Accounting (3)

This course focuses on accounting theory applicable to business combinations. The preparation of consolidated financial statements and the accounting for inter-corporate transfers of land, depreciable assets, and inventory are examined. Foreign currency transactions, the translation of foreign entity statements, and a brief introduction to alternate business entities will be offered.

## ACCT 540 Research in Taxation (3)

Students learn to research relevant areas of the tax laws. Objectives include acquiring the technical skills necessary to identify tax situations, isolating the tax issues, and developing the documentary support and arguments for acceptable solutions to complex tax problems. Upon completion of the course, students are able to use the major tax services (including computerized tax information resources) in order to prepare a tax memorandum that communicates the tax issues and related primary and secondary sources of federal tax law. The procedural processes for representing a taxpayer before the Internal Revenue Service are addressed.

## ACCT 542 Taxation of Pass-Through Entities (3)

Students will discuss and analyze income tax law and preparation requirements for various entities in which income tax elements and liabilities pass through to individuals' tax returns. Ethical guidelines, including Circular 230 and Statements on Responsibilities in Tax Practice will be considered

## ACCT 543 Taxation of Corporations with Interstate and International Transactions (3)

Students will discuss and analyze income tax law and preparation requirements for corporations, including interstate and international transactions. Ethical guidelines, including Circular 230 and Statements on Responsibilities in Tax Practice will be considered.

## ACCT 545 Estate Taxation and Planning (3)

This course introduces students to federal estate, gift and generation-skipping tax principles, as well as tax planning techniques for lifetime and testamentary dispositions of property. Topics covered will include tax planning for married couples, tax free and split-interest gifting techniques, charitable gifting techniques, valuation planning techniques, planning for family business interests and tax planning for life insurance and retirement benefits. Related tax policy issues will also be considered.

## ACCT 560 Special Topics (3)

This elective can be customized to provide an in depth review of selected issues which may affect external (i.e., financial, tax) and internal reporting within the local, national, and international areas.

## ACCT 570 European Origins of Modern Accountancy (3)

This Study Abroad course will trace the intellectual developments of modern accounting thought through its European origins from Renaissance Italy to the emergence of professional accounting and auditing in Great Britain. Students will explore the extant historical literature pertaining to the European origins of accounting and auditing as well as visit important sites including modern accounting's birthplace in Venice.
Prerequisite: Permission of the Instructor and Program Director

## ACCT 575 European Financial Markets (3)

This Study Abroad course will address the development, function, and integration of European financial markets and institutions.
Prerequisite: Permission of the instructor and Program Director.

## ACCT 599 Contemporary Accountancy Issues (3)

A required seminar in contemporary accountancy issues including financial reporting, assurance, and taxation. The specific topics covered will be determined by the contemporaneous standard setting, regulatory and economic environment. Students will complete a research thesis that bears to their intended area of practice.
Prerequisite: ACCT 500 and admission to the Master of Science in Accountancy program.
BLAW 509 International Business Law (3)
This course will give the student a basic overview of the regulatory framework of international business. This will involve both examination of the law of the United States as it
affects international business and regulations set by bodies outside of the United States.

## BLAW 529 Commercial Law (3)

This course covers selected aspects of business law including contract law, Articles 2, 2A, 3, 4, 4A, and 9 of the Uniform Commercial Code (UCC) (e.g. sales, leases, negotiable instruments, banking, electronic funds transfer, and secured transactions), bankruptcy, trusts and estates, auditor liability, and real property.

## BLAW 560 Special Topics (3)

This course is designed to provide an in-depth analysis of selected legal topics, such as securities and negotiations, which might affect accounting professionals.

## FINC 560 Special Topics in Finance (3)

This course provides an in-depth analysis of selected finance issues which might affect accounting professionals.

# Master of Business Administration 

Rhonda Mack<br>Associate Dean of Graduate and Professional Programs 843.953.6565<br>mackr@cofc.edu<br>Penelope McKeever<br>Associate Director of Graduate and Professional Programs<br>843.953.8112<br>mckeeverp@cofc.edu

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## James Kindley

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## http://mba.cofc.edu

## Worldwide Credentials. World-Class Experience

The College of Charleston School of Business has put its own stamp on the MBA. Our goal is to develop individuals with a global awareness and innovative mindset who make decisions from a cross-functional perspective and are accountable in the dynamic business environment.

Our intensive program combines a solid core curriculum and teaching excellence with real-world projects and case-based courses to give students the perspective and experience they need to advance in their careers. With a historically rich, coastal city as a backdrop, students will also examine gamechanging theory, processes, and applications used in progressive organizations throughout the world.
The yearlong MBA program fills a gap that currently exists in the Southeast region's management education. The program begins on campus in August with a rigorous pre-term session to develop professional effectiveness including communication, leadership, and team building skills. Accepted students are also required to successfully complete online courses of critical business foundations before proceeding to the academic courses in the fall semester. Students are challenged throughout the year in a variety of required courses including a session on creativity and innovation. In addition, every student participates in a required foreign travel study experience as well as required professional development activities and programs throughout the year.

## What Sets Us Apart From Other MBA Programs?

- Accelerate through a one-year MBA program including a valuable foreign travel study opportunity.
- Experience real-world business issues and challenges in an applied, case-based learning environment.
- Learn in cohort-based collaboration used in leading global organizations.
- Examine and apply theory, business process, and applications from an innovative approach.
- Choose a concentration in finance, marketing, or hospitality revenue management depending on your career interests.


## Admissions Considerations and Requirements

MBA students are potential business leaders who can navigate the operating environment of globally oriented, modern businesses. They must be able to analyze the opportunities and challenges of today's organizations faced with environmental, social and technological impacts. This is a rigorous program for students whose work ethic is an indicator of their professional potential and desire to succeed.

## The Following Are Required:

- A competitive GMAT, GRE or approved graduate proficiency exam score. The GMAT, GRE and GPA requirement for acceptance is a function of the number and quality of the application pool and therefore, extremely competitive. Average GMAT: ~590; GPA ~3.4.
- A competitive cumulative undergraduate GPA
- Interview if requested
- Two letters of recommendation, one of which must be an academic reference
- Goal statement
- English language requirements for international students: a minimum score of 6.5 on the IELTS, a minimum of 550 on the paper-based TOEFL, or a 83 on the computerbased TOEFL


## Interview:

Good interpersonal skills and strong communications are necessary for successful business professionals. As a result, an interview with each program candidate is desirable. A personal interview with either the director of the MBA program or program, staff or faculty will be scheduled after initial application screening. Candidates may also be contacted by the MBA program office for interviews on the College of Charleston campus.

## Letters of Recommendation:

Two (2) letters of recommendation are required using the forms provided. Letters should be from individuals who can attest to your qualifications for graduate study. One letter must be from an academic source.

## Goal Statement:

Explain how you perceive this program fits into your career goals and choices. Limit your statement to 300 words.

## Online Proficiency Courses:

All students are required to successfully complete the online proficiency courses by a specified date prior to pre-term.

## Transfer Credits:

Because this is a cohort program, transfer credit is not accepted.

## Program Format

The MBA is a one-year, full-time, daytime program. It begins with an online proficiency course, two week pre-term session and then continues throughout the fall and spring semesters and May evening session. Courses are taught Mondays through Thursdays. Additional required activities are scheduled on Fridays. There is also a $1 \frac{1}{2}$ to 2 week international travel study session. The MBA program website provides a detailed calendar.

## Master of Business Administration Degree Requirements

A total of thirty-six (36) credit hours at the graduate level must be successfully completed to earn the degree. Additional requirements such as the foreign travel study experience, preterm session, and additional non-credit components are also included.

## Required Core Courses ( 27 Credit Hours):

## MBAD 500

MBAD 502 Accounting Issues for Business Managers
MBAD 503 Financial Management
MBAD 504 Managing and Leading in Organizations
MBAD 505 Creativity and Innovation
MBAD 506 Operations Management
MBAD 518 Global Economics
MBAD 525 Marketing Management
MBAD 590 Integrated Capstone
Focus Area Courses (9 Credit Hours):
One of these focus areas is required. The study abroad will also reflect the focus area.

## Marketing Focus

MBAD 520 Global Enterprise
MBAD 521 Consumer Marketing Strategy
MBAD 522 Marketing Research and Analysis for Decision Making

## Finance Focus

$\begin{array}{ll}\text { MBAD } 515 & \begin{array}{l}\text { International Financial Markets and Risk } \\ \text { Management }\end{array}\end{array}$
MBAD 516 Financial Modeling
MBAD 517 Advanced Corporate Finance
Hospitality Revenue Management Focus
MBAD 530 Principles of Revenue Management in the Hospitality Industry
MBAD 531 Forecasting and Business Analytics
MBAD 532 Channel Management Strategies

## Business Administration Course Descriptions

## MBAD 500 Law of Corporate Governance (3)

A study of legal and ethical issues regarding the structure and operation of corporations. Topics include the corporation as a legal and moral "person"; legal and ethical responsibilities of directors, shareholders and officers in the U.S. and internationally; and government regulation of corporations, securities markets, and fair competition.

## MBAD 502 Accounting Issues for the Business Manager

 (3)In this six week intensive course, students will be exposed to regulatory and ethical issues related to financial and tax reporting, current techniques to measure costs and benefits for decision making purposes, responsibility accounting and tax minimization strategies in the United States as well as other international jurisdictions.

## MBAD 503 Financial Management (3)

This course provides students with a working knowledge of the principles of financial management, with an emphasis on decision making. Course materials and instruction will focus on the primary goal of shareholder wealth maximization and steps taken towards this goal.

## MBAD 504 Managing and Leading in Organizations (3)

In this course, students apply critical thinking in their analyses of organizations, employing a variety of perspectives. The course focuses on managing self, others, goals, and processes. Through contemporary projects and cases, students develop leadership and management capabilities that are ethically sound, globally aware, and environmentally sustainable.

## MBAD 505 Creativity and Innovation (3)

The global business environment is characterized by rapid technological change, ambiguity and uncertainty. To achieve sustainable competitive advantage, organizations must innovate through creative thinking and problem solving to design socially- and environmentally-responsible market opportunities. Students learn to foster innovation at the individual, group and organizational level through projects and cases.

## MBAD 506 Operations Management (3)

Businesses are always looking for efficiencies in their operations. Operations Management teaches the fundamentals of product creation, development, production, and distribution as well as quality control, logistics, and analysis of the production process. The student will learn practical, real-world skills for retail, manufacturing, or service organizations.

## MBAD 515 International Financial Markets and Risk Management (3)

This class is designed to provide a framework for understanding how international financial markets operate and the use of the financial tools to develop strategies to reduce the risks involved in international finance.

Prerequisites: MBAD 503 Financial Management

## MBAD 516 Financial Modeling (3)

This course examines financial modeling and covers a wide range of topics within all fields of Finance that lend themselves to financial modeling. The course will examine modeling in four primary areas: (1) corporate finance models, (2) fixed income securities models, (3) portfolio models, and (4) option pricing models.

Prerequisites: MBAD 503 Financial Management.

## MBAD 517 Advanced Corporate Finance (3)

This class is designed to provide a framework for understanding how corporate financial analysis is an important aspect of strategic decision making and the advantages/limitations of different financial theories with respect to their practical application.
Prerequisites: MBAD 502 Accounting Issues for the Business Manager; MBAD 503 Financial Management

## MBAD 518 The Global Economy (3)

This class is designed to provide a framework for understanding how national and international macroeconomic markets interact, how they impact business performance and, therefore, how they affect business decisions.

## MBAD 520 Global Enterprise (3)

This course focuses on the four functional areas of global enterprise: International Marketing, International Management, Supply Chain Management, and International Finance. By emphasizing the mechanisms and tools needed by businesses operating in the global area, students will develop an understanding of the skills and tools needed to operate globally.

## MBAD 521 Consumer Marketing Strategy (3)

This course provides the foundations for understanding, developing, and implementing consumer marketing strategies in the modern marketplace. Through readings, cases, and applications, students will learn about consumer behavior and decision making; understand how to influence consumers through communications, product, and brand strategies; incorporate issues of diversity into marketing strategy; etc.
Prerequisite: MBAD 525 Marketing Management

## MBAD 522 Marketing Research and Analysis for Decision Making (3)

This class presents a comprehensive framework of marketing research from the perspective of decision making in addition to current trends in international marketing research, ethics, and the integration of the Internet and computers.

Prerequisites: MBAD 525 Marketing Management.

## MBAD 525 Marketing Management (3)

This course provides students with an understanding of the principles of marketing management, with an emphasis on analysis and marketing planning. Through readings, cases, exercises, and applications, students will not only learn the
essentials of marketing but also be able to apply them in a business context.

## MBAD 530 Principles of Revenue Management in Hospitality (3)

The course introduces the principles and related theory of revenue management, examines the history and application of revenue management, explores the fit of a revenue management strategy to various types of organizations, identifies the requirements of revenue management, outlines the processes for implementation, and examines its place in the organization.

## MBAD 531 Forecasting and Business Analytics in Hospitality (3)

This course provides knowledge and hands-on skills on forecasting and business analytics used in revenue management. The student learns to use extensive data, statistical and quantitative analysis, exploratory methods, predictive models, time series and forecasting, to make factbased decisions and drive actions in order to maximize revenues and profits.
Prerequisite: MBAD 530, Principles of Revenue Management in Hospitality

## MBAD 532 Channel Management Strategies in Hospitality (3)

This course outlines strategies related to setting the right prices, developing rate fences, and using multiple distribution channels to manage price more effectively. Students will focus on the impact of variable pricing and discounting on revenue management in the context of price elasticity, optimal price mix, perceived fairness, and congruence with positioning and sales strategies.
Prerequisite: MBAD 530, Principles of Revenue Management in Hospitality

## MBAD 560 Special Topics (1-3)

This course will be customized to provide an advanced, in depth review of selected issues in business.
Prerequisite: Admission into the MBA program.

## MBAD 590 Integrated Capstone (3)

The primary objective of this course is to provide students with the opportunity to engage in integrative thinking and application. This entails confronting an organizational problem, which requires students to make connections among a variety of aspects, including their prior coursework, as well as the relationship of practice to theory.

Prerequisites: Prior completion of all other required and elective courses in the MBA program.

# Master of Arts in Communication 

Bethany Goodier<br>Chair<br>843.953.7420

## Amanda Ruth-McSwain <br> Program Director <br> 843.953.5783 <br> ruthmcswaina@cofc.edu

## http://www.communication.cofc.edu/

## Description

This 33-hour master's degree program emphasizes critical thinking skills through a holistic curriculum that stresses theoretical and research perspectives with application-based approaches. Full- and part-time students are welcome. All graduate students must earn a satisfactory rating on a comprehensive examination after completing 24 graduate hours in the program. Students may choose a thesis option or a non-thesis option for completing the program. The thesis option requires completion of a traditional research project, with students registering for three credit hours of Master's Thesis during each of two consecutive semesters (COMM 701-702). The non-thesis option requires completion of an approved three-credit hour graduate Internship (COMM 795), with a provision for waiving the internship requirement if a student demonstrates appropriate professional experience in a communication career. Students are permitted to take up to three cognate graduate hours at the College of Charleston outside the Communication program.

## Minimum Admission Requirements

- Baccalaureate degree from an accredited institution of higher education with a 3.0 minimum GPA overall and 3.0 in the major
- Scores from GRE tests taken through July 31, 2011 must have a composite score of 1000 on the combined verbal and quantitative sections and 4 on the writing assessment section. The minimum requirements for tests taken on or after August 1, 2011 require a minimum composite score of 300 .
- Acceptable coursework in communication or a closely related discipline.
- Two letters of recommendation from academic sources (professors, advisors, etc.).
- A writing sample demonstrating the candidate's academic and research capabilities.
- A statement of goals describing your interest in a master's degree in communication.
- Personal interview with the Program Director (or the Director's designee)
- Applicants are expected to have earned at least 12 undergraduate hours in communication or a related discipline.


## Transfer Credit Policy

An applicant or student of the M.A. in Communication program can seek approval from the Program Director to accept up to nine transfer credit hours. These courses must have a grade of B or higher, and can count toward the degree requirements if the course description and syllabus closely match the parameters set by the Communication program. Courses with a grade of "Pass" or "Satisfactory" may be accepted.

## Application Deadline

This program only accepts applications for candidates intending to begin courses during the Fall semester. Applications are accepted through March 1.

## Degree Requirements

Candidates must complete 33 credit hours, including the required courses outlined below. These courses are COMM 500 and COMM 510, plus one of each from the three choice options below for a total of 15 credit hours. To reach the 33hour minimum, candidates may choose COMM electives, plus either six thesis hours or three internship hours. Students may also take one cognate graduate course at the College of Charleston outside the Communication program.

Required Courses:

## Required of all students

COMM 500 Introduction to Graduate Studies in Communication
COMM 510 Communication Theory
Option One (Choose One):
COMM 501 Quantitative Research Methods
COMM 502 Qualitative Research Methods

Option Two (Choose One):
COMM 681 Classical Rhetorical Theory
COMM 682 Modern and Contemporary Rhetorical Theory
Option Three (Choose One):
COMM 701- Thesis
702
COMM $795 \quad$ Graduate Internship

## Communication Course Descriptions

## COMM 500 Introduction to Graduate Studies in Communication (3)

An introduction to the communication discipline and the dimensions of scholarship essential in the pursuit of a Master of Arts degree in Communication. Discussion will surround the philosophy of graduate studies in communication, the
principles and procedures of scholarly research, and the requirements of ethical communication scholarship.

Course must be taken in first semester of degree program, unless permission granted by graduate director.

## COMM 501 Quantitative Research Methods in Communication (3)

Quantitative methods employed in communication research, including experiments and surveys. Students will design quantitative research projects, learn to analyze data and write research reports.

## Prerequisite: COMM 500

## COMM 502 Qualitative Research Methods (3)

Qualitative methods employed in communication research, including ethnography, textual analysis and interviewing methods. Students will design qualitative research projects, learn to analyze data and write research reports.

## Prerequisite: COMM 500

## COMM 510 Communication Theory (3)

This course focuses on three epistemological approaches to the study of communication - empirical, interpretive and critical. The student will learn to consider each of these approaches, and in particular, what constitutes ways of knowing from each of the three perspectives, leading to an advanced understanding of the main theories of human and mediated communication.

Course must be taken in first semester of degree program, unless permission granted by graduate director.

## COMM 514 Social Media (3)

This course examines the role and influence of social media on communication processes, effects, and other forms of interpersonal and mediated messages. Students will conduct original research that explores contemporary theories of communication as applied to social media.

## COMM 520 Communication Campaigns (3)

This class will introduce students to communication theory, research, and practice in relation to campaign development. The primary course objective is to provide a solid framework for critiquing and/or conducting communication campaigns including planning, implementation, and evaluation. The course may focus on the health, political, or strategic communication process.

## COMM 522 International and Intercultural Communication

 (3)A review of intercultural, cross-cultural and international communication theories and issues. Implications for culturally diverse organizations.

## COMM 530 Race, Gender, Class and Media (3)

Students consider how gendered identities intersect with other social categories such as race, class, sexuality and nationality. Highlighting a cultural studies approach to media, students analyze such social categories across various media texts, how these representations are shaped by issues of media
production, and the various ways diverse audiences interpret media messages.

## COMM 540 Uses and Effects of Media (3)

The study of complex interrelationships between consumption of various types of media content and the thoughts, feelings, and behaviors of democratic citizens, with implications of such relationships in our civic and political lives. Students develop understanding of key theoretical ideas, hone critical skills to review and critique empirical research, and propose a research design.

COMM 561 Identity and Impression Management (3)
This course surveys theories and research regarding how individuals, groups and organizations attempt to manage the ways they are perceived by others through the strategic manipulation of communication practices and cues.

## COMM 569 Leadership Communication (3)

A survey of theories and research in leadership communication including interpersonal, group, organizational, and medicated contexts.

## COMM 580 Seminar in Communication (3)

This course offers graduate students advanced understanding of theory and research in special topics areas.

## COMM 584 Ethics in in Communication (3)

This course applies classical and contemporary philosophical and social scientific theories to ethical issues associated with interpersonal, group organizational and other communication contexts.

## COMM 680 Seminar in Rhetoric (3)

A topical seminar that evaluates research in rhetorical theory, method, and textual analysis criticism and culminates in an original research project. This course may be repeated for additional credit if the content is different.

## Prerequisites: COMM 500 and COMM 510

COMM 681 Classical Rhetorical Theory (3)
A critical survey of Greco-Roman rhetorical thought, from the pre-Socratic Sophists to St. Augustine, including the influence of classical theories on the Medieval and Renaissance periods in Europe. Readings drawn from primary sources as well as contemporary commentary on classical theories.
Prerequisite: COMM 500 and COMM 510
COMM 682 Modern and Contemporary Rhetorical Theory (3)

The study of Western rhetorical theory from the seventeenth century to the present. This course will survey the insights of rhetorical theory with respect to messages delivered in interpersonal, group, organizational and public communication contexts.

Prerequisite: COMM 500 and COMM 510

## COMM 690 Communication Pedagogy (3)

Under the supervision of a graduate faculty member, the communication pedagogy course provides students interested in the teaching and/or coaching profession to develop a greater understanding of and appreciation for the teaching experience. The pedagogy course includes five elements: teaching observation, reflection/critique, class management, and investigation of communication discipline.
Prerequisites: COMM 500, COMM 510, 12 hours completed in the program and permission of graduate program director

## COMM 699 Independent Study (1-3)

Individual study of an agreed-upon topic under the direction of a faculty member, following a course of reading and other requirements proposed by the student and established by negotiation with the graduate faculty member.
Prerequisite: COMM 500 and permission of graduate director

## COMM 701 Master's Thesis (3)

Credit hours for completion of a formal master's thesis under faculty direction. A successful oral defense of the thesis is required.

## Prerequisite: Permission of the Graduate Program Director.

## COMM 702 Master's Thesis (3)

Credit hours for completion of a formal master's thesis under faculty direction. A successful oral defense of the thesis is required.
Prerequisite: Permission of the Graduate Program Director.

## COMM 795 Internship (3)

A supervised field experience in which the student observes and participates in work related to the communication degree. The internship requires 120 or more hours of work and completion of a formal report. Graded on a satisfactory/unsatisfactory basis.
Prerequisites: COMM 500, COMM 510, 12 hours completed in the program and permission of graduate program director

# Master of Science in Computer and Information Sciences 

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## http://compsci.cofc.edu/

## Program Description

The College of Charleston and The Citadel offer a joint graduate program leading to a Master of Science in Computer and Information Sciences. The program is offered primarily at the Lowcountry Graduate Center and is designed to serve a growing professional work force in computer science, information technology and software engineering in the Lowcountry of South Carolina.
The 33-credit-hour program offers three areas of specialization: computer science, information systems and software engineering.
Courses are taught in the evenings or late afternoons, accommodating the schedules of most professional students. Courses are offered on alternating days, permitting full-time students to schedule up to four courses ( 12 credit hours) in a semester.

## Thesis Options

Students pursuing the Master's may complete the degree in one of three ways for any of the three specialization areas.
Non-thesis option: A student must complete 33 credit hours of graduate coursework.
Project thesis option: A student must complete 30 hours of graduate coursework and a project thesis. This option is characterized by a research project that applies or extends course topics through systems development. The project may be associated with a current work-related problem. External documentation will accompany the project. Students electing this option will need to register for CSIS 698 during the semester in which the research begins.
Research thesis option: A student must complete 27 hours of coursework and a research thesis. The thesis option is a traditional research project characterized by a comprehensive paper on a research topic. Students selecting this option will register for CSIS 699, which is a six-credit-hour course that extends over two semesters.

Notes: All options for degree completion requirements are constrained by elapsed time and GPA requirements for graduation.

For any thesis or project thesis with a duration that extends into additional semesters, including the summer, students are required to register for additional research hours. Research hours do not satisfy elective credit hours.
Both the thesis option and the project thesis option require a proposal for project approval. Proposals are submitted to the program director for approval by the program director and the thesis advisor.

## Program Duration

A typical professional student might take two courses per semester during the fall and spring terms and one course during the summer. Such a schedule would put the student on track to graduate in two and a half years, depending on which degree-completion option is selected. Non-degree students simply desiring to build skills and expertise in one or more specialized areas may, of course, simply schedule such courses as desired. A full-time, degree-seeking student would typically take between three and four courses during the fall and spring terms and up to two courses during the summer, putting the student on track to graduate within a year and a half, depending on the degree-completion option.

## Minimum Admission Requirements for Master's Program

- A completed application form - degree-seeking admissions status.
- An official copy of a transcript from each institution of higher learning attended, including documentation of graduation from an accredited four-year college or university.
- Scores from GRE tests taken through July 31, 2011 must have a minimum combined score of 1000 on the verbal and quantitative sections of the general test, and a minimum score of 4.0 on the writing assessment. The minimum requirements for tests taken starting August 1, 2011 require a composite score of 300 . There is a fiveyear time limit on the use of scores.
- International students must demonstrate proficiency in the English language and fulfill other admissions requirements as set forth by the policies of The Graduate School of the College of Charleston.
- Either coursework or acceptable work experience in computer science and mathematics. All students must have an understanding of the following four core competencies:
- basic computer architecture
- object-oriented programming
- discrete mathematics
- data structures
- In addition to the core competencies, it is highly recommended that students also have the proper background in their specialization of choice.
Recommended competencies by specialization are:
- Computer science specialization: operating systems theory and programming language theory;
- Information systems specialization: business management;
- Software engineering specialization: programming language theory.
Note: Undergraduate courses are available for completing the competency requirements.


## Transfer Credit Policy

An applicant or student of the M.S. in Computer and Information Sciences program can seek approval from the Joint Program Committee to accept up to nine transfer credit hours. These courses must have a grade of B or higher, and can count toward the M.S. in Computer and Information Sciences degree requirements. Courses with a grade of "Pass" or "Satisfactory" will not be accepted.

## Plan of Study

A plan of study must be approved by the program director and would include a list of any required undergraduate competency courses.

## Master of Science in Computer and Information Sciences Degree Requirements

The master of science in computer and information sciences degree is conferred upon those candidates who successfully complete an approved program of study consisting of a minimum of 33 semester hours of graduate credit (of which no more than nine may be transfer credits) with a cumulative GPA of 3.0.
All specializations require the four core courses below plus the courses outlined within each specialization. Any specialization with fewer than 18 credit hours will not appear on students' transcripts.

CSIS 601
CSIS 602 Foundations of Software-Engineering
CSIS 603 Object-Oriented Design Patterns
CSIS 604 Distributed Computer Systems Architecture

## Computer Science Specialization

The student will complete three courses from among the following:
CSIS 612 Advanced Computer Architecture
CSIS 614 Advanced Operating Systems
CSIS 616 Automata Theory
CSIS 618 Programming-Languages
And one additional course from among CSIS 612, 614, 616, 618 (if not used above) and
CSIS 638 Advanced Topics in Database Systems
CSIS 674 Introduction to Computer -Graphics
CSIS 690 Special Topics (if subject matter is appropriate for the Computer Science specialization) as determined by the Joint-Committee for the MSCSIS)

## Information Systems Specialization

The student will complete the following two courses:

CSIS 631 Privacy and Security Issues
CSIS 632 Data Communications and Networking
And two additional courses, chosen from among:
CSIS 634 Project Change and management
CSIS 636 IT Policy and Strategy
CSIS 638 Advanced Topics in Database Systems
CSIS 659 Service-Oriented Computing
CSIS 672 Human Computer Interaction
CSIS 690 Special Topics (if subject matter is appropriate for the Information Systems specialization as determined by the Joint Committee for the MSCSIS)

## Software Engineering Specialization

The student will complete:
CSIS 656 Software Systems Design and Implementation
Either:
CSIS 654 Software Requirements Analysis and Specification or
CSIS 658 Software Testing and Maintenance
And two additional courses, chosen from among the following:

CSIS 654
CSIS 634
CSIS 657
CSIS 659
CSIS 672
CSIS 690 Special Topics (if subject matter is appropriate for the Software Engineering specialization as determined by the Joint Committee for the MSCSIS)

## Computer and Information Sciences Course Descriptions

## CSIS 601 Data Modeling and Database Design (3)

Topics include conceptual, logical, and physical data modeling, data analysis, relational database design and normalization, query languages, query processing, administration, and CASE tools. A database design project is part of the requirement and includes hands-on data modeling, design, development, and implementation.

## CSIS 602 Foundations of Software Engineering (3)

A survey course in software engineering processes and methodologies. This course includes software life cycles, planning and managing projects, capturing and managing requirements, analysis and design, implementation, software testing and quality assurance and risk analysis in software development. Emphasized are team-based development, quality standards, object-oriented design and CASE (computer-aided software engineering) tools.

## CSIS 603 Object-Oriented Design Patterns (3)

A course in software design using design patterns as a tool for communicating software design solutions and as an aid in software refactoring. Creational, structural and behavioral
patterns are emphasized. Also covered are finding and documenting software development patterns. The Unified Modeling Language is used as the design tool for software patterns and programming projects are in an object-oriented programming language.

## CSIS 604 Distributed Computer Systems Architecture (3)

This course covers basic techniques for the design and construction of distributed systems. Its aim is to give the skills needed to build simple systems and to identify key issues for the analysis of distribution problems.

## CSIS 612 Advanced Computer Architecture (3)

This course covers various topics relevant to clustering, including the following: interconnection networks, protocols, high performance I/O, load balancing, availability, programming models and environments, parallel algorithms, and applications. The course will be lab-intensive and will include the implementation of parallel algorithms on a Beowulf Cluster.

Prerequisites: CSIS 604 or permission of department.

## CSIS 614 Advanced Operating Systems (3)

This course covers a broad range of advanced operating systems concepts including protection, security, memory management, kernels, file systems, synchronization, naming, networks and distributed systems as well as recent trends in operating systems design. Specific aspects of operating systems that support distributed computing will be emphasized.
Prerequisite: CSIS 604 or permission of department.

## CSIS 616 Automata Theory (3)

The theory of finite state machines and regular expressions are applied to the design of switching circuits, components of compilers such as lexical analysis, pattern-matching, text editors, unifications as needed in Prolog or for automated deduction, and almost any program which processes under commands. Undecidable problems and intractable problems are explored.

Prerequisite: Knowledge of discrete mathematics.
CSIS 618 Programming Languages (3)
The course surveys the principles of programming language design and the issues related to their implementation. Topics will include a comparison of the major programming paradigms: imperative, functional, logic and object oriented. Also covered are data types, methods of specifying the semantics of language constructs, and concurrency.

## CSIS 631 Privacy and Security Issues (3)

A survey of the principles and practices related to computer security. The course concentrates on the problems of security associated with computer systems and emphasizes the application of cryptography to address those problems.

## CSIS 632 Data Communications and Networking (3)

An introduction to data communications and computer networking. Topics include LAN topologies, transmission
media, error detection, packet switching networks, Internetworking of heterogeneous network technologies, Internet protocol suites (with emphasis on TCP/IP), the client/server paradigm, the BSD socket interface, network security and network applications.

## CSIS 633 Semantic Web Principles and Practice (3)

This course covers the emerging technology supporting the Semantic Web with machine-processable content. Students will engineer and implement ontologies, associated metadata and logical inference systems. Covered are specialized languages such as Extensible Markup Language (XML), Resource Description Framework (RDF), and Ontology Web Language (OWL) and associated query languages.

## CSIS 634 Project Change and Management (3)

Managing projects within an organizational context, including the processes related to initiating, planning, executing, controlling, reporting and closing a project form the major portion of this course. Project integration, scope, time, cost, quality control, risk management and managing the changes in organization resulting from introducing or revising information systems are also included.

## CSIS 636 IT Policy, Strategy and Governance (3)

This course will consider the development and implementation of policies and plans to achieve organizational goals, the defining of systems that support the operational, administrative and strategic needs of the organization, as well as the study of approaches to managing the information systems function in organizations.

## CSIS 638 Advanced Topics in Database Systems (3)

Topics such as algorithms for query processing and optimization, physical database design, transaction processing, concurrency control, database backup and recovery techniques, database security, distributed databases, multimedia databases, object and object-relational databases, data warehousing, and data mining.

## CSIS 654 Software Requirements Analysis and Specifications (3)

An introduction to the software requirements engineering process. Topics to include feasibility studies, risk, requirement elicitation, modeling, analysis, specification and validation.
Prerequisite: CSIS 602.

## CSIS 656 Software Systems Design and Implementation

 (3)An introduction to the issues, techniques, strategies, representations and patterns used in designing and implementing software. Possible design topics include: specification of internal interfaces, architectural design, data design, user-interface design, design tools and evaluation of design. Possible implementation topics include: languageoriented issues, construction technologies, tools and formal constructions methods.

Prerequisites: CSIS 602 and CSIS 603.

## CSIS 657 Embedded Systems Design (3)

This course is an introduction to specifying, designing, implementing, and testing (real-time) embedded systems. Topics include the embedded system lifecycle, choosing a processor, hardware/ software partitioning, design techniques, cross-platform development, debugging, testing, and integration. Implementation languages may include Java, C/C++ or assembly.
Prerequisites: CSCI 602 and CSCI 604.
CSIS 658 Software Testing and Maintenance (3)
An introduction to the concepts and methods associated with software testing and maintenance. Testing topics to include: testing as part of the requirements for engineering and software design, test plan writing and static and dynamic testing. Maintenance topics to include: an overview of corrective, adaptive, perfective and preventive maintenance activities as well as organizational managerial issues.

## Prerequisite: CSIS 602.

## CSIS 659 Service-Oriented Computing (3)

Service-Oriented Computing is a term that describes software systems that combine Service-Oriented Architecture (SOA) and Business Process Management (BPM) layers. This course explores both SOA and BPM, demonstrating how business and IT concerns can be aligned. Students will gain experience with service-oriented development, process modeling and execution, and securing services.

## CSIS 672 Human-Computer Interaction (3)

Introduction to human-computer interaction and user-interface development. Topics include human factors of interactive software, interactive styles, design principles and considerations, development methods and tools, interface quality and evaluation methods. This course stresses the importance of good interfaces and the relationship of user interface design to human-computer interaction. It is intended for students whose future work may involve software development.

## CSIS 674 Introduction to Computer Graphics (3)

An introduction to the fundamental principles of computer graphics. Using standard graphics libraries, students will learn these principles by writing a series of programming projects.

## CSIS 690 Special Topics in Computing (3)

A course in the special study of an advanced or new topic in computer science, information science or software engineering. This course may be repeated for additional credit, as the topics change.
Prerequisite: Permission of the instructor.

## CSIS 691 Independent Study (3)

This course consists of individual study of an agreed-upon topic under the direction of a faculty member and following a course of reading and other requirements proposed by the student and established by negotiation with the director. This course is intended to provide graduate students with an opportunity to study in an area of computer science, software
engineering or information systems that is not generally offered. This course may be repeated once.

## CSIS 698 Project Thesis (3)

Project Thesis is a three-credit-hour course for the completion of a formal master's project thesis under faculty direction. A Project Thesis is characterized by a research project that applies or extends course topics through systems development.

Prerequisites: Completion of the four core courses (CSIS 601, CSIS 602, CSIS 603, and CSIS 604) and approval by the program director.

## CSIS 699 Research Thesis (6)

Research Thesis is a six-credit-hour course for the completion of a formal master's research thesis under faculty direction. A Research Thesis is a traditional research project characterized by a comprehensive paper on a research topic.
Prerequisite: Completion of the four core courses (CSIS 601, CSIS 602, CSIS 603, and CSIS 604) and approval by the program director.

# Master of Arts in Teaching Early Childhood Education 

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## http://teachered.cofc.edu/grad-progs/edec.php

## Master of Arts in Teaching (M.A.T.): Early Childhood Education (PreK-3)

The M.A.T. in Early Childhood Education, an NCATE accredited program that focuses on the education of children in pre-Kindergarten through third grade, is nationally recognized by the National Association for the Education of Young Children (NAEYC). It is designed for those who want to teach young children and have undergraduate degrees in non-education disciplines.
Successful completion of the M.A.T. program requirements leads to recommendation for teaching certification/licensure in grades pre-Kindergarten through three in South Carolina, in addition to a master's degree. The State of South Carolina has reciprocal licensure agreements with many State Departments of Education across the United States.

## Degree Requirements

The M.A.T. in Early Childhood education is awarded to candidates who successfully complete an approved program of study consisting of a minimum of 48 graduate semester hours of credit with an overall GPA of 3.0. Students' undergraduate transcripts will be evaluated; if a deficiency in liberal arts coursework is determined, additional courses may be required and included in the program of study. Candidates have one calendar year following program acceptance to complete the additional coursework with a minimum GPA of 2.5 .

Certification requirements for M.A.T. students are described in the teacher education program student information packet for M.A.T. students and the Clinical Practice Handbook. As part of the certification procedure, each M.A.T. student must take the national PRAXIS tests: Early Childhood Education Content Area and Principles of Learning and Teaching. Advisors will provide important details about this requirement. All examinations are administered by the Educational Testing Service and application forms are available in the School of Education, Health, and Human Performance main office, 86 Wentworth Street. One copy of each test score must be sent directly to the College of Charleston School of Education, Health, and Human Performance and another copy to the South Carolina State Department of Education.

## Admissions Requirements

Submit all application materials to The Graduate School.

- A completed application form with a nonrefundable application fee of $\$ 50$.
- Official transcripts of all undergraduate and graduate coursework. An earned bachelor's degree from an accredited college or university is required.
- Undergraduate coursework should reflect a broad liberal arts background.
- Applicants are required to have a 2.5 (on a 4.0 scale) grade point average (GPA) from their degree-granting institution(s).
- Two letters of recommendation from persons familiar with academic and/or work experience. Letters should indicate evidence of potential for graduate studies and working with children. One letter should be from someone who has observed the candidate working with children.
- Professional résumé.
- Self-assessment of professional goals and dispositions.
- Statement of ability to perform essential teaching duties under the Americans with Disabilities Act (ADA).
- A statement of goals describing the applicant's suitability for and a desire to pursue the M.A.T. program and a career in teaching.
- Results of the Test of English as a Foreign Language (TOEFL) if applicant's primary language is not English.
- Official Graduate Record Examination (GRE) scores. Expectations are a minimum composite GRE score of 800 as well as a score of 4.0 or higher on the analytical writing sample for exams taken prior to August 1, 2011. For exams taken on or after that date, expectations are a minimum composite score of 290.
Note: Admissions requirements may change. Please visit http://gradschool.cofc.edu for the most current requirements.


## Transfer Credit Policy

An applicant to the M.A.T. in Early Childhood Education program may seek approval from the program director to accept up to six transfer credit hours. These courses must have a grade of B or higher, and can count toward any core course in the Early Childhood Education program.
Students may take a course at another CEC/NAEYC accredited institution after being accepted to a master's program and that course can count towards the student's degree requirements, but the student must make the request one semester in advance and meet with his/her faculty advisor for approval. Once the advisor approves, the request will be forwarded to the program director for final approval. Grades of B and higher will be accepted. No pass/satisfactory grades or field hours will be accepted.

## Completion of a Program of Study

As soon as possible after acceptance into the program and before enrolling in courses, an appointment must be made with an advisor to complete a Program of Study form. The process for filing an acceptable Program of Study is not completed until all copies of the form, with required signatures, have been filed with The Graduate School. The

Program of Study is not official until the candidate is admitted as a degree-seeking student. Failure to meet the deadline for filing an acceptable program of study may result in a delay in graduation or loss of credit for use in the program.
All academic work that has been completed, as well as that which is proposed for satisfying degree requirements, must be included in the Program of Study at the time of submission. Students may make changes of up to two courses in the Program of Study that are necessitated by enrollment problems or other circumstances by completing a Request for Change form. This form must be endorsed by the advisor, department chair, and the program director. More extensive changes may be accomplished by filing a new Program of Study marked "revised plan."
After the Program of Study is completed, the student meets with the advisor over the course of the program for scheduling and program planning to ensure timely completion of program requirements.

## Master of Arts in Teaching Early Childhood Education Program of Study

## Prerequisites

Prerequisites: Prerequisites may be taken concurrently with graduate program courses, but must be completed within one calendar year of admission. Undergraduate prerequisites are determined by transcript evaluation. In addition, the following two graduate or equivalent undergraduate courses are required:

EDFS 654 Human Growth and Development (3)
EDFS 687 Introduction to Educational Technology (3 hours) (or an intermediate computer course) taken within the last three years.

Focus Area I: Development of the Learner and the Relationship to Content Learning Development (6 Hours)
EDEE 510* Educational Theory, Behavior, and Development of the Young Child: Field Experience I (3 hours)
EDEE 617* Language Literacy and Literature for Early Childhood (3 hours)
*Must be taken concurrently.
Focus Area II: Pedagogy and Content Knowledge (18 Hours)
EDEE 613 Curriculum and Development in Early Childhood Education (3 hours)
EDEE 638 Mathematics and Science in Early Childhood Education (3 hours)
EDEE 642 Social Studies and Humanities for Early Childhood and Elementary Teachers (3 hours)
EDEE 653 Theories and Strategies for Developing Literacies (3 hours)
EDEE 615* Assessment in Student Learning (3 hours)*
EDEE 636* Methods and Materials in Early Childhood Education (3 hours)*
*Must be taken concurrently.

## Focus Area III: Creating an Effective Climate for Learning (15 Hours)

EDEE 606 Teaching Diverse Learners (3 hours)
EDEE 655 Creativity and the Fine Arts (3 hours)
EDEE 664 Health and Physical Education (3 hours)
EDEE 620* Home, School, and Community Relationship (3 hours)*
EDEE 682* Field Experience III in Early Childhood Education (3 hours)*
*Must be taken concurrently.

## Focus Area IV: Culminating Professional Experiences (9 Hours)

EDEE 698 Clinical Practice in Early Childhood Education (9 hours)
Total program credit hours: 48 graduate hours not including prerequisite course hours.
Note: The School of Education, Health, and Human Performance policy states that field experience and clinical practice placements are made within the tri-county area. The School of Education, Health and Human Performance reserves the right to place candidates in the closest approximate placement.

## Title II Report Card

The College of Charleston Title II Report Card can be located by going to the South Carolina Department of Education Title II website: http:// title2.ed.gov. Additionally, copies of the report can be requested by contacting the director of the Office of Student Services and Certification at 843-953-5613 or 86 Wentworth Street, College of Charleston, Charleston, S.C. 29424-0001. To discuss the College of Charleston Title II Report Card, contact the dean of the School of Education, Health, and Human Performance at 843.953.5613.
For the purposes of Title II reporting, a program completer is defined as a candidate who has successfully completed clinical practice.

## Non-Degree Status (Certified Teachers Only)

Certified educators who are not seeking a degree, but who wish to take courses in education for the purposes of professional development and recertification, may be admitted as non-degree students. Candidates should submit a completed application form with a nonrefundable application fee of $\$ 45$ and a copy of a professional teaching credential.
A non-degree graduate student subsequently may be reclassified as a regular-degree student in a M.Ed. program. In order to accomplish reclassification as a degree-seeking student, the candidate must submit two letters of recommendation, a graduate course transcript with at least a 3.0 GPA (if courses have been completed) and other requirements listed above. No more than a total of 6 credit hours of work taken in non-degree status may be applied toward degree requirements if the student is later admitted to a degree program. Non-degree status is not intended to be a
temporary classification for those found ineligible for admission to the degree program.

## Professional Development for Certified Teachers

Certified educators can enroll in professional development courses through the School of Education, Health, and Human Performance's Office of Professional Development in Education (OPDE). These courses, known as professional development courses (EDPD) are used to modernize instructional strategies and offer content enrichment opportunities while leading to recertification points and pay scale advancements. These professional development credits offered through OPDE do not count toward the completion of an advanced degree such as the Master of Education or Master of Arts in Teaching. For more information regarding professional development courses, contact the OPDE Office at 843.953.7651.

Please note that EDPD courses differ from catalog courses. A catalog course has been approved as part of a course of study in a College of Charleston graduate-level program. These courses are ones that are offered through a contract course arrangement and count towards a master's degree in a specific discipline area (i.e.: M.A.T. and M.Ed. programs). They are awarded graduate credit, reviewed, and accepted by the specific discipline/curriculum involved.

## M.A.T. in Early Childhood Education Course Descriptions

## EDEE 510 Educational Theory, Behavior, and Development of the Young Child: Field Experience I (3)

An introduction to early childhood education including 1) historical and philosophical antecedents, 2) developmentally appropriate practice, 3 ) field-based experiences and 4) academic and behavioral characteristics of young children and related program implications. The field experiences include observation in infant, toddler, preschool, and primary grades. Co-requisite: EDEE 617
Note: Practicum required.

## EDEE 606 Teaching Diverse Learners (3)

The emphasis of the course is on inclusion strategies for special needs students in regular classrooms. Appropriate referral and instructional strategies will be analyzed and explored.

## EDEE 613 Curriculum and Development for Early Childhood Education (3)

An analysis of early childhood curricular theory, instructional programs, related research and societal needs. Particular emphasis is given to the physical, emotional, social and cognitive characteristics of children at different developmental levels, and techniques and materials suitable for teaching at this level. The course includes the study of innovative and experimental programs.
Note: Required for early childhood certification.

## EDEE 615 Assessment in Student Learning (3)

This course is designed to provide theoretical and experiential knowledge regarding basic principles of educational assessment and evaluation. The course will focus on the acquisition of traditional and performance-based knowledge and assessment skills, and the examination of contemporary evaluative issues confronted by educators pre-K through grade 3.

Prerequisites: EDFS 687 and 654 or equivalents, EDEE 510 and 617. Co-requisite: EDEE 636

## EDEE 616 Methods and Materials in Early Childhood Education (3)

The process of development of content areas and their implementation in educational programs for young children. Emphasis is on current methods, techniques, and materials suitable for teaching at this level. The course includes the study of innovative and experimental programs.

## Note: Required for add-on early childhood certification.

## EDEE 617 Language, Literature and Literacy in Early Childhood Education (3)

This course provides students with the fundamental theory, research and practice of a literature-based language arts program. Topics include language development, the language experience approach to teaching reading, research on the effectiveness of differing approaches to the teaching of reading, and using picture-story books, traditional literature and poetry to facilitate the learning-to-read process.
Co-requisite: EDEE 510

## EDEE 620 Home, School, and Community Relationships

 (3)A study of the relationships that exist in the educational triad of home, school and community. Strategies for increasing communication and collaboration between parents and schools are addressed and the skills needed to be an advocate for young children are explored. Topics include current family demographics, the abused child, the parent community, rights and responsibilities, resources and leadership training. Corequisite: EDEE 682
Note: Practicum required for M.A.T. students.

## EDEE 636 Methods and Materials in Early Childhood Education: Field Experience II (3)

Instruction, observation, and field experience related to planning and implementing lessons for pre-kindergarten, kindergarten, and primary grade students. Students learn to plan and implement lessons with differentiated curriculum, instruction, and assessment and the use of developmentally appropriate methods and materials. Candidates plan for and teach individual students, small groups of students, and provide flexible grouping for whole class instruction. A minimum of 20 hours of field experience is required. Corequisite: EDEE 615
Note: Required for early childhood certification.

## EDEE 638 Mathematics and Science in Early Childhood Education (3)

A study of the development of mathematics and science concepts and processes in children. The relationship is explored between curriculum content, instructional strategies and materials and ways in which young learners construct knowledge. Physical health and safety education are included.

## EDEE 642 Social Studies and Humanities for Early Childhood and Elementary Teachers (3)

An in-depth examination of the relationship between the social studies curriculum, social studies instruction and the ways in which elementary students construct social knowledge and values.

## EDEE 653 Theories and Strategies for Developing Literacies (3)

This course examines 21st-century definitions and conceptualizations of "reading" and "text" through theories, methods, strategies and materials in teaching communication skills to elementary and middle-school students. Aspects of listening, speaking, reading, writing, and viewing will be explored. Topics include literacy processes, supporting classroom diversity and meeting students' instructional literacy levels.

## EDEE 655 Creativity and the Fine Arts (3)

An in-depth study emphasizing teaching content knowledge within the discipline of fine arts for preschool, kindergarten and elementary school children.

## EDEE 664 Health and Physical Education for the Elementary Teacher (3)

Development of physical, health, and safety education as an integral part of the life of the elementary age child and the curriculum of the school. The relationship between organization, development and instruction in health and physical education activities and safety practices are explored.
Prerequisite: EDFS 654.

## EDEE 682 Field Experience III in Early Childhood Education (3)

This course provides early childhood education candidates the opportunity to plan and teach multiple subjects to diverse young learners. Candidates examine the early childhood teachers' role in establishing and maintaining a positive and productive learning environment in the classroom. They learn to assess their students' performance as well as their own. Candidates will complete a minimum of 30 hours of field experience in an appropriate early childhood classroom and 15 hours of seminar.

Prerequisites: First two field experiences (EDEE 510 and 636) or their equivalents. Co-requisite: EDEE 620

EDEE 698 Clinical Practice in Early Childhood Education (9)

A course in which students are placed in a local elementary school in a pre-kindergarten, kindergarten, first, second, or third grade to observe, teach, and participate during the entire school day for a minimum of 60 days ( 12 weeks). Weekly on-
campus seminars are also required. Students must apply for admission to student teaching one year prior to enrollment.

Prerequisites: Admission to the teacher education program and completion of all education courses.

## EDFS 654 Human Growth and Development (3)

The study of general principles of lifelong human growth and development and the relationship of teaching and learning theories to physical, social, intellectual and emotional development. (fall, spring and summer)

## EDFS 687 Introduction to Educational Technology (3)

This is an introductory course for pre-service and in-service teachers using technology in the classroom. Students become familiar with application software such as word processing, databases and hypermedia, desktop publishing and telecommunications, and learn to evaluate hardware and software. (fall, spring and summer)

# Master of Arts in Teaching Elementary Education 

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http://teachered.cofc.edu/grad-progs/edel.php

## Master of Arts in Teaching (M.A.T.): Elementary Education (2-6)

The M.A.T. in Elementary Education, an NCATE accredited program that focuses on the education of second through sixth-graders, is designed for those who want to teach elementary school children and have undergraduate degrees in non-education disciplines. The program combines academic work and a variety of experiences in public elementary schools.

Successful completion of the M.A.T. program requirements leads to recommendation for teaching certification/licensure in grades second through sixth in South Carolina, in addition to a master's degree. The State of South Carolina has reciprocal licensure agreements with many State Departments of Education across the United States.

## Degree Requirements

The M.A.T. in Elementary Education is awarded to candidates who successfully complete an approved program of study consisting of a minimum of 48 graduate semester hours of credit and earn an overall GPA of 3.0 or higher. Students' undergraduate transcripts will be evaluated; if a deficiency in liberal arts coursework is determined, additional courses may be required and included in the program of study. Candidates have one calendar year following program acceptance to complete these additional requirements with a minimum GPA of 2.5 .

Certification requirements for M.A.T. students are described in the teacher education program student information packet for M.A.T. students and the Clinical Practice Handbook. As part of the certification procedure, each M.A.T. student must take the national PRAXIS tests: Elementary Content Area and Principles of Learning and Teaching. Advisors will provide important details about this requirement. All examinations are administered by the Educational Testing Service and application forms are available in the School of Education, Health, and Human Performance Main Office, 86 Wentworth Street. One copy of each test score must be sent directly to the College of Charleston School of Education, Health, and Human Performance and another copy to the South Carolina State Department of Education.

## Admissions Requirements

- A completed application form with a nonrefundable application fee of $\$ 50$.
- Official transcripts of all undergraduate and graduate coursework. An earned bachelor's degree from an accredited college or university is required.
- Undergraduate coursework should reflect a broad liberal arts background.
- Applicants are required to have a 2.5 (on a 4.0 scale) grade point average (GPA) from their degree-granting institution(s).
- Two letters of recommendation from persons familiar with academic and/or work experience. Letters should indicate evidence of potential for graduate studies and working with children. One letter should be from someone who has observed the applicant working with children.
- Professional résumé.
- Self-assessment of professional goals and dispositions.
- Statement of ability to perform essential teaching duties under the Americans with Disabilities Act (ADA).
- A statement of goals describing the applicant's suitability for and desire to pursue the M.A.T. program and a career in teaching.
- Results of the Test of English as a Foreign Language (TOEFL) if applicant's primary language is not English.
- Official Graduate Record Examination (GRE) scores. Expectations are a minimum composite GRE score of 800 as well as a score of 4.0 or higher on the analytical writing sample for exams taken prior to August 1, 2011. For exams taken on or after that date, expectations are a minimum composite score of 290.
Note: Admissions requirements may change. Please visit http://gradschool.cofc.edu for the most current requirements.


## Transfer Credit Policy

Applicants to the M.A.T. in Elementary Education program may seek approval from the program director to accept up to six transfer credit hours. These courses must have been taken from an accredited institution and have a grade of B or higher. Courses transferred into the program may count toward any core course in the Elementary Education program.

Students may take a course at another institution after being accepted to a master's program and that course can count towards the student's degree requirements, but the student must make the request one semester in advance and meet with his/her faculty advisor for approval. Once the advisor approves, the request will be forwarded to the program director for final approval. Grades of B and higher will be accepted. No pass/satisfactory grades or field hours will be accepted.

## Completion of a Program of Study

As soon as possible after acceptance into the program and before enrolling in courses, an appointment must be made with an advisor to complete a Program of Study form. The process for filing an acceptable Program of Study is not completed until all copies of the form, with required signatures, have been filed with the Graduate School. The Program of Study is not official until the candidate is admitted
as a degree-seeking student. Failure to meet the deadline for filing an acceptable Program of Study may result in a delay in graduation or loss of program credits.
All academic work that has been completed, as well as that which is proposed for satisfying degree requirements, must be included in the Program of Study at the time of submission. Students may make changes of up to two courses in the Program of Study that are necessitated by enrollment problems or other circumstances by completing a Request for Change form. This form must be endorsed by the advisor, department chair, and the program director. More extensive changes may be accomplished by filing a new Program of Study marked "revised plan."

After the Program of Study is completed, the student meets with the advisor over the course of the program for scheduling and program planning to ensure timely completion of program requirements.

## Master of Arts in Teaching Elementary Education Program of Study

Prerequisites may be taken concurrently with graduate program courses but must be completed within one calendar year of admission. Undergraduate prerequisites are determined by transcript evaluation. In addition, the following three graduate or equivalent undergraduate courses are required:

## EDFS 652 Foundations of Education

EDFS 654 Human Growth and Development
EDFS 687 Introduction to Educational Technology (or an intermediate computer course) taken within the last three years

## Focus Area I: Foundations of Learning and Learner Development (6 Hours)

EDEE 640* Development of Language and Literacies (3 hours)
EDEE 645* Field Experience I in Elementary Education (3 hours)
*Must be taken concurrently.
Focus Area II: Pedagogy and Content Knowledge (21 Hours)
EDEE 641 Science for the Elementary School Teacher (3 hours)
EDEE 642 Social Studies and Humanities for Early Childhood and Elementary Teachers (3 hours)
EDEE 653 Theories and Strategies for Developing Literacies (3 hours)
EDEE 664 Health and Physical Education for the Elementary Teacher (3 hours)
EDEE 665 Elementary School Arithmetic: Content and Instruction (3 hours)
EDEE 610* Integrating Assessment and Instruction (3 hours)
EDEE 614* Field Experience II in Elementary Education (3 hours)
*Must be taken concurrently.

## Focus Area III: Creating an Effective Climate for Learning (12 Hours)

EDEE 606 Teaching Diverse Learners (3 hours)
EDEE 655 Creativity and the Fine Arts (3 hours)
EDEE 690* Creating Effective Learning Communities (3 hours)
EDEE 695* Field Experience III in Elementary Education (3 hours)*
*Must be taken concurrently.

## Focus Area IV: Culminating Professional Experiences (9 Hours)

EDEE 699 Clinical Practice in Elementary Education (9 hours)
Total program credit hours: 48 graduate hours not including prerequisite course hours.
Note: The School of Education, Health, and Human Performance policy states that field experience and clinical practice placements are made within the tri-county area. The School of Education, Health, and Human Performance reserves the right to place candidates in the closest approximate placement.

## Title II Report Card

The College of Charleston Title II Report Card can be located by going to the South Carolina Department of Education Title II website, http://title2.ed.gov. Additionally, copies of the report can be requested by contacting the director of the Office of Student Services and Certification at 843-953-5613 or 86 Wentworth Street, College of Charleston, Charleston, S.C. 29424-0001. To discuss the College of Charleston Title II Report Card, contact the dean of the School of Education, Health, and Human Performance at 843.953.5613.

For the purposes of Title II reporting, a program completer is defined as a candidate who has successfully completed clinical practice.

## Non-Degree Status (Certified Teachers Only)

Certified educators who are not seeking a degree, but who wish to take courses in education for the purposes of professional development and recertification, may be admitted as non-degree students. Candidates should submit a completed application form with a nonrefundable application fee of $\$ 45$ and a copy of a professional teaching credential.
The non-degree graduate student subsequently may be reclassified as a regular-degree student in a M.Ed. program. In order to accomplish reclassification as a regular-degree student, the candidate must submit two letters of recommendation, a graduate course transcript with at least a 3.0 GPA (if courses have been completed) and other requirements listed above. No more than a total of 6 credit hours of work taken in non-degree status may be applied toward degree requirements if the student is later admitted to a degree program. Non-degree status is not intended to be a temporary classification for those found ineligible for admission to the degree program.

## Professional Development for Certified Teachers

Certified educators can enroll in professional development courses through the School of Education, Health, and Human Performance's Office of Professional Development in Education (OPDE). These courses, known as professional development courses (EDPD), are used to modernize instructional strategies and offer content enrichment opportunities while leading to recertification points and pay scale advancements. These professional development credits offered through OPDE do not count toward the completion of an advanced degree such as the Master of Education or Master of Arts in Teaching. For more information regarding professional development courses, contact the OPDE Office at 843.953.7651.

Please note that EDPD courses differ from catalog courses. A catalog course has been approved as part of a course of study in a College of Charleston graduate-level program. These courses are ones that are offered through a contract course arrangement and count towards a master's degree in a specific discipline area (i.e.: M.A.T. and M.Ed. programs). They are awarded graduate credit, reviewed, and accepted by the specific discipline/curriculum involved.

## M.A.T. in Elementary Education Course Descriptions

## EDEE 515 Middle School Organization and Curriculum (3)

An overview of the middle school concept, including 1) historical and philosophical antecedents, 2) conflicting perceptions of middle school, 3) definitions of middle school and middle-level concept, 4) characteristics of the emerging adolescent and related program implications, 5) change factors involved in conversion to the middle school concept, 6) evaluation methods for determining effectiveness and student progress and 7) speculation on the future of the middle school movement.

## EDEE 606 Teaching Diverse Learners (3)

The emphasis of the course is on inclusion strategies for special needs students in regular classrooms. Appropriate referral and instructional strategies will be analyzed and explored.

## EDEE 610 Integrating Assessment and Instruction (3)

The course provides the participant opportunities to examine instructional models and assessment strategies in education (a) through research, application and demonstration, and (b) within the context of the way related concepts, models and strategies vary to guide educational decision making in a range of developmental areas from early childhood, to elementary, to middle school. The course covers important concepts and theories in learning, instructional design, and assessment.

## Co-requisite: EDEE 614

## EDEE 614 Field Experience II in Elementary Education (3)

This course provides elementary education candidates multiple opportunities to observe and teach lessons in public elementary classrooms and to connect observational data with theory and practice related to classroom assessment during the
elementary years. Additionally, it provides candidates the opportunity for service learning in the schools.

Prerequisite: EDEE 645; co-requisite: EDEE 610.

## EDEE 615 Assessment in Student Learning (3)

This course is designed to provide theoretical and experiential knowledge regarding basic principles of educational assessment and evaluation. The course will focus on the acquisition of traditional and performance-based knowledge and assessment skills, and the examination of contemporary evaluative issues confronted by educators pre-K through grade 3.

Prerequisites: EDFS 687 and 654 or equivalents, EDEE 510 and 617.

## EDEE 620 Home, School, and Community Relationships

 (3)A study of the relationships that exist in the educational triad of home, school and community. Strategies for increasing communication and collaboration between parents and schools are addressed and the skills needed to be an advocate for young children are explored. Topics include current family demographics, the abused child, the parent community, rights and responsibilities, resources and leadership training.
Note: Practicum required for M.A.T. students.

## EDEE 625 Interdisciplinary Themes: Design and Implementation (3)

The course provides knowledge and experience in the design and implementation of interdisciplinary themes (units). The focus is on the planning and evaluation of grade-level units that incorporate multiple subject areas. Topics include rationale and framework, integration of content, teaching strategies and evaluation.

## EDEE 634 Trends and Issues in Elementary Education (3)

A course focusing on current trends and issues in elementary and middle-level education as they relate to children and teaching in grades one through eight.

## EDEE 640 Development of Language and Literacies (3)

The course explores the nature of language, its functions within language settings, and its development within cultures and individuals. The impact of family, community and dialect upon communication will be investigated. The role of story in helping children to communicate effectively is a component of this program. The course also outlines the role of language in developing literacies (reading, writing, viewing, computing) needed to survive in today's world.
Co-requisite: EDEE 645

## EDEE 641 Science for the Elementary School Teacher (3)

An in-depth examination and analysis of the relationship between the science curriculum, science instruction and the ways in which elementary students discover and invent knowledge in the science content areas.
Note: Practicum required.

## EDEE 642 Social Studies and Humanities for Early Childhood and Elementary Teachers (3)

An in-depth examination of the relationship between the social studies curriculum, social studies instruction and the ways in which elementary students construct social knowledge and values.

## EDEE 645 Field Experience I in Elementary Education (3)

This course provides elementary education candidates multiple opportunities to observe in public elementary classrooms and to connect observational data with theory and practice related to language and literacy development during the elementary years. Additionally, participants analyze an academic Long Range Planning document in relation to observed classroom activities. Co-requisite: EDEE 640.

EDEE 648 Language and the Integrated Curriculum (3)
The study of language learning and curriculum development through the examination of current research with focus on the design and implementation of interdisciplinary units.

## EDEE 650 Analysis of Current Research in Child Development (3)

A framework for the study of the child's cumulative and integrative growth experience provided by psychological patterning from early childhood to adolescence. Key theories of personality and developmental principles are evaluated in the light of selected research studies and field experience.

## EDEE 653 Theories and Strategies for Developing Literacies (3)

This course examines 21st-century definitions and conceptualizations of "reading" and "text" through theories, methods, strategies and materials in teaching communication skills to elementary and middle-school students. Aspects of listening, speaking, reading, writing, and viewing will be explored. Topics include literacy processes, supporting classroom diversity and meeting students' instructional literacy levels.

## EDEE 655 Creativity and the Fine Arts (3)

An in-depth study emphasizing teaching content knowledge within the discipline of fine arts for preschool, kindergarten and elementary school children.

## EDEE 663 Children's Literature (3)

Study of the historical development of children's books and the significant literature available for children today. Criteria for evaluating juvenile literature and ways of stimulating children's interest in books are presented. Discussion includes the uses of fantasy, fairy tales and myth, the abridgment of classics, the introduction of poetry and the special needs of children from disadvantaged backgrounds. Students are introduced to a wide range of reading material which may be relevant to curriculum content or which offer children a reading-for-pleasure experience.

## EDEE 664 Health and Physical Education for the Elementary Teacher (3)

Development of physical, health, and safety education as an integral part of the life of the elementary age child and the curriculum of the school. The relationship between organization, development and instruction in health and physical education activities and safety practices are explored.
Prerequisite: EDFS 654.

## EDEE 665 Elementary School Arithmetic: Content and Instruction (3)

Skill development and mastery of terminology, symbolism, and content contained within the scope and sequence of the elementary school curriculum. Approaches to assist the teacher in the analysis, preparation and delivery of instruction are identified.

## EDEE 667 Curriculum Theory and Application (3)

This course will expand the candidate's understanding of theories, issues, and practices of curriculum development. The course will examine the history of curriculum development in the United States and will identify educational, political, and social forces that have shaped curriculum. Students will identify reoccurring themes, major leaders in curriculum, and will gain an understanding of how curriculum is developed from the classroom to the national level. By examining their own understanding of curriculum, they will begin to conceptualize potential capstone projects.

## EDEE 669 Behavior of the Young Child (3)

Basic presentation of skills required to assess the needs, motivations and capacities of young children. Methods of observing, recording, and documenting behavior (individual and group), and the interpretation of the underlying dynamics are studied. Children's art, language and dramatic play are examined as materials for understanding the meaning of behavior. Students examine widely used test materials in order to determine under what circumstances and by whom the test should be given, and the results are evaluated and used.
Prerequisite: EDEE 650, EDFS 654, or permission of the instructor.

## EDEE 670 Elementary Science Instruction (3)

A course for elementary teachers who have at least partial responsibility for science teaching. It focuses on comprehension and application of integrated science process skills using concepts from life, earth and physical science to teach them. $\dagger$ Courses in this program address national and state science and mathematics standards.

## EDEE 678 Methods and Materials for Reading Instruction (3)

An in-depth examination of the relationship between reading methods, reading materials and the thinking processes which elementary students use to construct knowledge.

## EDEE 681 Field Experience in Reading (3)

A supervised clinical and/or laboratory school practicum experience in the diagnosis and correction of a reading
disability case. An opportunity to develop and implement a corrective reading program for a disabled reader is provided.

Prerequisite: Permission of the instructor.

## EDEE 685 Independent Study in Education (1-3)

Graduate students may undertake a study of a special topic in education chosen by the student and individually supervised. Each project must be done in consultation with a member of the graduate faculty qualified to guide and evaluate the student's work. Time deadlines must be set before initiation of the project.
Prerequisite: Permission of the instructor required.

## EDEE 690 Creating Effective Learning Communities (3)

This course focuses on how teachers create collaborative and inclusive communities of learners. Supportive, preventive and corrective teaching practices and management strategies are emphasized. Teacher candidates will research, analyze and evaluate current management practices.

Prerequisites: EDEE 610 and 614; co-requisite: EDEE 695.

## EDEE 695 Field Experience III in Elementary Education (3)

This course provides elementary education candidates multiple opportunities to observe and teach lessons in public elementary classrooms and to connect observational data with theory and practice related to managing students, learning and classroom communities during the elementary years.
Additionally, it provides candidates the opportunity for service learning in the schools.
Prerequisites: EDEE 610 and 614. Co-requisite: EDEE 690.

## EDEE 699 Clinical Practice in Elementary Education (9)

A course in which students are placed in a local elementary school to observe, teach and participate during the entire school day for a minimum of 60 days ( 12 weeks). Weekly on campus seminars are also required. Students must apply for admission to student teaching one year prior to enrollment.

Prerequisites: admission to the teacher education program and completion of all education courses.

EDEE 700 Thesis (3)
A research project completed under the guidance of a graduate faculty member and submitted and defended before a graduate committee.

## EDEE 701 Thesis (3)

Continuation of EDEE 700.
EDEE 702 Research and Development Project (3-6)
An in-depth study of an individually chosen topic that is planned and completed under the guidance of the student's advisor and submitted for review by the graduate faculty.

## EDEE 706 Special Topics in Education (1-3)

Study of a particular subject or theme in educational methods of teaching or content. Specific topics are listed with the course title when offered, e.g., Special Topics in Education: Marine Science for Elementary Teachers.

# Master of Arts in English 

Scott Peeples<br>Chair<br>843.953.1993

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## http://english.cofc.edu

## Program Description

The Graduate School of the College of Charleston and The Citadel offer a joint Master of Arts in English. The thirty-six (36) hour program, with a thesis option, provides advanced coursework in British literature, American literature, English language, and composition and rhetoric. The program is designed to attract qualified holders of the baccalaureate degree, whether recent college graduates, English teachers, or others interested in pursuing graduate studies in English. A joint program committee, comprised of faculty members from each institution, oversees admissions, course scheduling, comprehensive examinations, degree certification, and other matters related to the management of the program. Diplomas and other official documents will indicate that the program is a joint endeavor and will include the names of both institutions.

## Minimum Admission Requirements

## Degree-seeking students:

- Submit a completed application form with a nonrefundable application fee of $\$ 50$.
- Submit an official copy of a transcript from each institution of higher learning attended, including documentation of graduation from an accredited four-year college or university. The transcript(s) should be sent directly from the institution(s) attended to The Graduate School of the College of Charleston.
- Submit at least two letters of recommendation from former professors or immediate supervisors in recent employment. Each referee should be as specific as possible in addressing the applicant's motivation and ability to successfully complete a graduate degree.
- Submit a two-page statement of goals about educational goals and interest in a graduate program in English.
- Submit a writing sample that demonstrates an ability to perform literary analysis and conduct research. Typically, this requirement can be met by submitting a research paper prepared for an advanced undergraduate English course.
- Submit an official copy of scores from the general test of the Graduate Record Examination (GRE) or the Miller Analogies Test (MAT). The test(s) must have been taken during the past five years. Those taking the MAT should
have a score of at least 45. Scores from GRE tests taken through July 31, 2011 must have a composite score of 1000 on the combined verbal and quantitative sections and 4 on the writing assessment section. The minimum requirements for tests taken on or after August 1, 2011 require a minimum composite score of 300 and 4 on the writing assessment section.
- Applicants are expected to have a cumulative undergraduate GPA of at least 2.5 on a 4.0 scale and a 3.0 in the major.


## Non-Degree Students:

- Submit a completed application form with a nonrefundable application fee of $\$ 45$
- Submit one official copy of a transcript from each institution of higher learning attended, including documentation of graduation from an accredited four-year college or university. The transcript(s) should be sent directly from the institution(s) attended to The Graduate School of the College of Charleston.
- Non-degree students may be permitted to register for up to 12 semester hours of credit prior to applying for admission to the program. Non-degree students who have taken in excess of 12 semester hours of graduate courses in English must have written permission from the Joint Program Committee to continue enrollment in a nondegree status.


## Application Deadlines

The Joint Program Committee will consider completed applications for the regular degree program on the following dates:

Fall: May 1
Spring: November 1
Summer: April 1
Applications will be considered year round for non-degree students.

## Plan of Study

In consultation with the program director, each degree-seeking candidate will develop a plan of study that includes coursework at both institutions.

## Courses

Graduate study in English demands extensive reading and writing, thorough research, and advanced literary analysis. Only graduate students will be automatically enrolled. However, advanced undergraduates - upper-level students in English and related fields - may request enrollment in 500level classes. To do this they will need permission from the instructor and the Joint Program Committee. No more than two 500-level courses may be taken by an undergraduate. Courses at the 600- and 700- levels are for graduate students exclusively.

## Transfer Credit Policy

An applicant or student of the M.A. in English program can seek approval from the Joint Program Committee to accept up to 12 transfer credit hours. These courses must have a grade of B or higher, and can count toward the M.A. in English degree
requirements. Courses with a grade of "Pass" or "Satisfactory" will not be accepted.

## Master of Arts in English Degree Requirements

The Master of Arts in English is conferred upon those candidates who successfully complete an approved program of study consisting of at least 36 semester hours of graduate credit with a cumulative GPA of 3.0. Specific requirements are listed below:

## Thesis Option

- British Literature Before 1800 (6 hours)
- British Literature After 1800 (6 hours)
- American Literature (6 hours)
- Electives (12 hours)
- Thesis and Oral Defense of Thesis (6 hours)
- Comprehensive Examination
- Demonstration of competency in one foreign language, ancient or modern


## Non-Thesis Option

Same as above, except that the thesis requirement is dropped and the number of Elective hours increases to 18 .

## Other Requirements

- At least one course must be a seminar.
- Approved electives will, in most cases, be graduate courses in English. Others will be considered on a case-by-case basis by the Joint Program Committee.
- Because the close study of language itself is an invaluable experience for students earning their M.A. in English, the program requires that students demonstrate competence in an ancient or modern foreign language. This requirement may be met in one of the following ways:
- Complete two years or their equivalent of collegelevel study in a single foreign language with an average grade of C or higher
- Complete, with a grade of B or higher, English 517: Old English Language
- Pass a translation test in a foreign language administered by the graduate program in English. The test may be taken in German, French, Italian, Spanish, Ancient Greek, or Latin. Other languages will be considered on a case-by-case basis.
- At least nine hours must be taken at each campus.
- No more than nine hours of 698 (3), 699 (3), 701(6), or 702 in any combination may count toward the 36 hours.
- A comprehensive examination is prepared and administered by the Joint Program Committee, and is taken by all candidates after the completion of at least 27 hours of coursework. This comprehensive examination is a thorough review of the fields covered in the student's
program. For those who complete a thesis, a satisfactory oral defense is also required before final certification for the degree.


## African American Concentration

Students opting to add a concentration in African American literature* must meet the normal requirements for the M.A. degree. As part of their 36-hour course of study, they also must complete one of these two courses of study:

## Standard Option

- 9 hours of African American literature (any combination of 535,570, 571,572, and 573)
- 3 hours of study of an African American topic in another discipline, as approved by the program director
- 3 hours of independent study or internship in an African American topic, as approved by the program director


## Thesis Option

- 6 hours of African American literature (any combination of 535,570,571,572, and 573)
- 3 hours of study of an African American topic in another discipline, as approved by the program director
- 6 hours of thesis on an African American topic Students can apply one of their African American literature courses to the American literature requirement for the M.A. Students can use their elective hours to meet these course requirements.
* Note: Because this concentration consists of fewer than 18 credit hours, it will not be listed on students' transcripts.


## Course Descriptions

## ENGL 501 Chaucer (3)

A study of Chaucer's language, art, and cultural milieu through the reading of Troilus and Criseyde, the Canterbury Tales and many of the shorter works.

## ENGL 502 Shakespeare (3)

A comprehensive study of Shakespeare's art, including an intensive reading of several plays and appropriate attention to the primary critical approaches.

## ENGL 503 English Drama to 1642 (3)

A study of English drama from its origins in the Middle Ages, through the predecessors and contemporaries of Shakespeare, and on to the closing of the theatres in 1642.

## ENGL 504 Poetry and Prose of English Renaissance (3)

Non-dramatic poetry and prose of the 16th and early 17th centuries, with emphasis on the major authors (Spenser, Sidney, Marlowe, Jonson, Donne and Herbert) and on the major literary types.

ENGL 505 Milton (3)
A study of the major poetry, selected prose, and selected minor poems with emphasis on Paradise Lost.

ENGL 506 Restoration and Eighteenth Century Drama (3)
A study of such important dramatists of the period as Otway, Etherege, Wycherley, Dryden, Congreve, Vanbrugh, Farquhar, Goldsmith, Sheridan and others.

## ENGL 507 Survey of Restoration and Eighteenth-Century Literature (3)

A study of Dryden, Swift, Pope, Johnson, Blake and other important poets and prose writers of the period.

ENGL 509 Romantic Literature (3)
A study of the chief features of the Romantic writings of the early 19th century, with special emphasis on Wordsworth, Coleridge, Byron, Shelley and Keats.

ENGL 510 Victorian Literature (3)
A study of English literature from 1832 to 1900 of major writers such as Tennyson, Browning, Arnold, Carlyle, Swinburne and Rossetti.

ENGL 512 Southern Literature (3)
A study of a wide range of literature written in or about the American South.

ENGL 516 Continental Literature (3)
A study of European literature in translation since the Renaissance, including works by such authors as Cervantes, Moliere, Racine, Goethe, Stendhal, Balzac, Tolstoy, Dostovevsky and important writers of the 20th century.

ENGL 517 Special Topics in Literature (3)
A study of a special author, period, topic, or problem in literature outside the routine offerings of the department. The subject for each course will be announced.

## ENGL 520 a Survey of World Literature I (3)

Masterpieces of world literature in translation from the beginnings to around 1650 with special attention to the philosophical content and the development of literary forms.

ENGL 521 a Survey of World Literature II (3)
Masterpieces of world literature in translation from around 1650 to the present time with special attention to the philosophical content and the development of literary forms.

ENGL 522 Colonial and Revolutionary American Literature (3)

A detailed study of major American writers from the earliest settlers through the end of the 18th century.

## ENGL 523 Nineteenth-Century American Literature I Romanticism (3)

A study of major figures of the American Romantic period (approximately 1830-1860).

ENGL 524 Nineteenth-Century American Literature II Realism (3)
A study of major figures of the American Realistic period (approximately 1860-1900).

## ENGL 525 Eighteenth-Century British Novel (3)

A study of the origins of the British novel, including such figures as Fielding, Richardson, and Defoe.
ENGL 526 Victorian Novel (3)
A study of major British novelists of the late 19th century, including Dickens, Eliot and Hardy.

## ENGL 527 British Fiction 1900 to 1945 (3)

A study of the novels and short stories of major 20th-century British writers up to 1945, including such figures as Conrad, Lawrence, Forster, Woolf and Joyce.

ENGL 528 American Fiction 1900 to 1945 (3)
A study of the novels and short stories of major writers of the first half of the twentieth century, including such figures as Fitzgerald, Wolfe, Faulkner and Hemingway.

ENGL 529 American Fiction Since 1945 (3)
A study of significant American novels and short fiction published since World War II.

## ENGL 530 Special Topics in Humanities (3)

A study of special areas of the humanities or related areas which are outside the normal course offerings of the English department. The subject for each course will be announced.

## ENGL 531 British Poetry 1900 to Present (3)

A study of the poetry of major 20th-century British authors, such as Hardy, Yeats, Thomas and Auden.

ENGL 532 American Poetry 1900 to Present (3)
A study of major poets after 1900.

## ENGL 533 British Drama 1900 to Present (3)

A study of the work of major 20th-century British dramatists, such as Shaw, Pinter, Stoppard and Beckett.

## ENGL 534 American Drama 1900 to Present (3)

A study of significant American plays written after 1900.

## ENGL 535 African American Literature (3)

A survey of African American literature from the early days of slavery to the struggle for emancipation, to the 20th-century Harlem Renaissance and civil rights movement.

## ENGL 537 Contemporary British Literature (3)

A study of post-World War II British writers.

## ENGL 550 Special Topics in Composition Or Language (3)

A study of a special author, period, topic, or problem in composition or language that is outside the routine offerings of the department. The subject for each course will be announced.

## ENGL 552 Literature for Adolescents (3)

A study of literature for the adolescent, including methods of introducing the major literary genres to the secondary school student.

## ENGL 553 Modern English Grammar (3)

An intensive study of the syntax of Present Day English. The course also includes a review of traditional grammar, focusing primarily on the parts of speech. Special attention is given to linguistic theory, particularly regarding the acquisition of language.

## ENGL 554 History of the English Language (3)

A historical survey of the syntactic and phonological features of Old, Middle, Early Modern, and Present Day English. Special attention is given to the varieties of American English, particularly African American Vernacular English.

## ENGL 555 Literary Criticism (3)

A study of the major theories of how to understand literature and practical application of the theories to particular works of literature.

ENGL 556 Theory and Practice of Teaching Composition (3)

A study of traditional and contemporary theories of the composition process and applications of those theories to teaching composition.

## ENGL 557 Creative Writing - Poetry (3)

Class discussion of student writing using 20thcentury poems as models.

## ENGL 558 Technical and Professional Writing (3)

Principles and practice of technical communication as applied to reports, technical papers, oral presentations and business communications.

## ENGL 559 History and Theory of Rhetoric (3)

A study of language as a means of winning the assent, sympathy or cooperation of an audience. Includes contemporary rhetorical theory and its development from classical rhetoric.
ENGL 560 Film Studies (3)
This film course will expose students to films from a variety of nations and filmmakers that represent the chief cinematic movements of the twentieth century (Weimar Expressionism, French New Wave, American Noir, etc.), and it will instruct students in the terminology and techniques of filmmaking. The students will, by studying the relationship between the tools of filmmaking and the finished products, learn to "read" films as metaphors of reality.

## ENGL 562 Workshop in Advanced Composition (3)

The study, discussion, and practice of advanced composition techniques; including the use of computer technology for print documents, audiovisual presentations and web applications.

## ENGL 563 Creative Writing - Fiction (3)

Class discussion of student writing using 20th century short stories as models.

## ENGL 570 Topics in African American Literary Genres (3)

A study of a particular genre of African American literature, such as drama, the novel or poetry. Topics will vary according to instructors.

## ENGL 571 Topics in African American Literary Periods (3)

A study of a particular period of African American literature, such as the Harlem Renaissance. Topics will vary according to instructors.

## ENGL 572 Topics in Major African American Writers (3)

A study of a particular African American writer, such as Langston Hughes or Toni Morrison. Topics will vary according to instructors.

## ENGL 573 Special Topics in African American Literature

 (3)A study of a specific topic in African American literature that is not a genre, period, or individual writer. Topics will vary according to instructors.

## ENGL 650 Principles of Literary Research (3)

Study of textual bibliography, research methods and resources, and methods of presenting research.

ENGL 698 Tutorial (3)
Individual study of a given topic following a syllabus of readings, papers and other requirements prescribed by a faculty member.

## ENGL 699 Independent Study (3)

Individual study of an agreed-upon topic under the direction of a faculty member but following a course of reading and other requirements proposed by the student and established by negotiation with the director.

## ENGL 700 Seminar (3)

Individual research into a scholarly or critical problem in literature, composition or language. Progress, methods, and results will be shared with the class by presentation and discussion and will lead to the preparation of a single long paper.

## ENGL 701 Thesis (6)

Six credit hours for completion of a formal master's thesis under faculty direction.

## ENGL 702 Internship (1-3)

A supervised field experience in which the student observes and participates in a professional occupation related to the English degree, such as publishing, technical writing, or teaching. The internship will consist of at least 40 hours of work per credit hour and completion of a formal report. Permission of the graduate director is required. Graded on a satisfactory/unsatisfactory basis.

# Master of Science in Environmental Studies 

Timothy J. Callahan<br>Program Director

Mitchell Colgan<br>Geology Department Chair

Willem J. Hillenius<br>Biology Department Chair

## Robert Mignone <br> Mathematics Department Chair

## Narayanan Kuthirummal <br> Physics Department Chair

H. Gibbs Knotts<br>Political Science Department Chair

## Victoria Vazquez

Program Coordinator
843.953.2000
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## Program Description

The Master of Science in Environmental Studies program (MES) prepares students to deal with the complex nature of environmental issues through an interdisciplinary approach that capitalizes on the unique faculty and research strengths of The Graduate School of the College of Charleston. The faculty contributes through policy sciences, economics, law, mathematics and the natural and physical science areas of biology, chemistry, geology, and physics. In addition, we offer a dual program with the Master of Public Administration Program, and MES has a Peace Corps Master's International program which links the M.S. degree with specialized international service as a Peace Corps volunteer. You can find more information on these programs elsewhere in this catalogue.

## Mission

The MES program provides students with an interdisciplinary approach to identify environmental problems without sacrificing the training rigor of a specific academic discipline. The interdisciplinary emphasis is established through a carefully designed set of required courses that provide students with an understanding of environmental issues. The curriculum addresses these issues by teaching students the principles of basic scientific research; by giving students the tools to evaluate the human dimensions of environmental problems and potential solutions; and by helping students
examine the role of public policy in environmental decisionmaking.

## Academic Advisor and Advisory Committee

A student's program of study consists of a list of coursework and other requirements that the student must complete to graduate from the MES program. Upon entering the program, each student selects an academic advisor who works with the student to establish an applied research (academic internship) or thesis project and to plan coursework. The academic advisor develops the coursework program of study in consultation with the student, oversees student progress, and advises the student about his or her career and academic options. The academic advisor might or might not participate directly in the student's independent research; at a minimum the advisor helps the student arrange his/her research committee led by a research advisor.

## Admissions

Admission to the MES program requires a baccalaureate degree from an accredited institution. Students with any major are encouraged to apply, but must have a sufficient background in either the natural, policy, and/or social sciences.

Minimum admissions requirements are listed below. Some applicants may not satisfy all requirements. Every effort will be made to accommodate such applicants through preparatory classes at the College of Charleston. Exceptions can be made on an individual basis, depending on a candidate's background or experience.
The environmental studies program is governed by a Steering Committee comprised of members who represent the contributing departments.

## Minimum Requirements

- An overall undergraduate GPA of 3.0 (on a scale of 4)
- Scores from GRE tests taken prior to July 31, 2011 must have a composite score of at least 1100 on the combined verbal and quantitative sections and a minimum of 4.0 on the writing assessment section. The minimum requirements for tests taken after July 31, 2011 require a minimum composite score of 305 .
- Students must have undergraduate coursework in biology (two courses with labs), chemistry (two courses with labs), and statistics (one semester). One year of another physical or natural science may be substituted for either biology or chemistry. The admissions committee recognizes that some students with exceptional backgrounds and training in other areas may wish to enter the program. These students are encouraged to apply and will be considered on a case-by-case basis, but should understand that they may be required to take one or more additional science courses.
- Three letters of recommendation that specifically address the prospective student's academic qualifications and career potential in environmental studies.
- A statement of personal goals to be achieved by the applicant during his/her time in the program.

To be considered for admission, students must complete an MES application packet. An application packet for the MES program can be obtained by written request to:

## Program Coordinator

Graduate Program in Environmental Studies
The Graduate School of the College of Charleston
Charleston, S.C. 29424

## Application Deadlines

Fall semester: March 1
Spring semester: November 1

## Transfer Credit Policy

An applicant or student of the Master of Science in Environmental Studies program can seek approval from the joint admissions committee to transfer in nine credit hours to count toward either degree. These courses require a grade of B or higher, or a grade of Satisfactory or Pass.

## Degree Requirements

The Master of Science in Environmental Studies degree requires a minimum of 37 hours of coursework. Each student is required to complete a sequence of core courses. Students will then choose electives from a range of approved courses, according to their area of interest. Central to the student's activity is a research project (as either a thesis or applied research project) of which six credit hours are awarded upon successful completion of the project.

## Master of Science in Environmental Studies Core Courses

Students are required to take 23 credit hours of core courses as outlined below. The core courses fall into four categories: statistics, science, policy and case-based.

## Environmental Studies:

EVSS 646 Core Seminar (2 cr.)

## Statistics:

EVSS 659 Environmental Statistics (3 cr) or
EVSS 624 Biometry (4 cr)

## Environmental Policy:

EVSS 601 Economic Theory for Policy Analysis (3 cr.)
EVSS 602 Public Policy (3 cr.)
EVSS 632 Social Science Methods for Environmental Studies (3 cr)

## Environmental Science:

EVSS 610 Environmental Biology (3 cr.) or
EVSS 631 Pollution in the Environment (3 cr.) or
EVSS 640 Earth Systems Science (3 cr.) or
EVSS 650 Energy Production for Resource Management (3 cr.)

## Thesis/Internship:

EVSS 690 Applied Research (Internship) (6 cr.) or
EVSS 691 Thesis (6 cr.)

## Environmental Studies Course Descriptions

## EVSS 601 Economic Theory for Policy Analysis (3)

This course covers the application of microeconomic theories to the analysis of contemporary public sector issues, with an emphasis on environmental problems. Attention is given to the conceptual and practical problems associated with resource allocation decisions when there is conflict among efficiency, equity and limited information in policy making. The foundations of welfare economics and applications of costbenefit analysis as they relate to specific environmental policies and programs are examined as well.

## EVSS 602 Public Policy (3)

This course seeks to develop a firm understanding of the public policy-making process in the United States. Students study policy making through various perspectives on implementation. The roles of major institutions including the executive, legislative and judicial branches of government, the bureaucracy and interest groups in this process are addressed. Includes various perspectives and interpretations of policymaking, including incrementalism, rationalism, pluralism and elitism. Selected areas of public policy, including transportation, poverty, energy and the environment are used to illustrate both the process and the different perspectives.

## EVSS 605 Environmental Law and Regulatory Policy (3)

This course examines the development of environmental law and regulatory policy in the United States. It provides an overview of the scope and substance of environmental law and the various regulatory techniques they employ. Both criminal and civil litigation surrounding the implementation of environmental law are examined.

## EVSS 607 Administrative Law (3)

A study of the legislative, adjudicatory, and general policymaking powers of administrative agencies and regulatory commissions, and the scope of judicial review of administrative action. The course is directed primarily toward an analysis of the political nature of the bureaucracy, and secondarily toward the procedural requirements for administrative policy making.

## EVSS 608 Perspectives on Public Administration (3)

The study and practice of public administration in the United States in the 20th Century. This course examines the historical development of the field of public administration and current approaches to the study and practice of public administration.

## EVSS 609 Administrative Ethics and Accountability (3)

A critical examination of the legal, political, professional, and organizational accountability demands made on administrators and their relationship to ethical decision making and ethical integrity.

## EVSS 610 Environmental Biology (3)

This course emphasizes the application of fundamental toxicological and microbiological concepts to problems which exist in the real world. The course should prepare the student interested in environmental problems with the necessary practical information to make sound judgments in assessing meaningful solutions to existing environmental problems.

## EVSS 619 Biology of Coral Reefs (3)

An introduction to the biology and ecology of reef-building corals and coral reefs. Topics to be covered include coral ecology (nutrition, reproduction, population structure, and distribution), taxonomy and systematics, biogeography and reef-building processes. The course will also cover natural and human induced disturbances on coral reefs and discuss exploitation and coral reef management options.

## EVSS 620 Physiology and Cell Biology of Marine Organisms (4)

A study of the regulatory mechanisms found in marine organisms especially as they relate to interactions between the organism and the environment. Mechanisms will be discussed at the organismal, organ-system, tissue and cellular levels.

## EVSS 622 Ecology of Marine Organisms (4)

The study of living organisms in the marine environment population and community ecology, reproduction and life histories, productivity, evolution and biogeography. A broad overview of these elements is followed by detailed consideration of major coastal and oceanic ecosystems around the world.

## EVSS 623 Physical Oceanography (4)

A study of the physics and chemistry of ocean and estuarine water, circulation, waves, and tides. Lecture and laboratory work will emphasize the interrelationships of physical, chemical, geological and biological processes in the sea.

## EVSS 624 Biometry (4)

A broad treatment of statistics concentrating on specific statistical techniques used in biological research. Topics covered include sampling procedures and analysis of distributions (binomial, poison, and normal), hypothesis testing and estimation with emphasis on analysis of frequencies, regression and correlation. Several nonparametric and multivariate methods are also discussed. Emphasis is on application of statistical techniques and not theory; therefore knowledge of mathematics through calculus is expected.

## EVSS 627 Marine Tetrapod Biology (4)

This lecture, laboratory, and field course emphasizes both the diversity and common themes of the physiological, behavioral, and anatomical adaptations that characterize certain lineages of reptiles, birds and mammals that exploit a wide array of marine habitats. Highlighting the faunas of South Carolina, we will evaluate marine tetrapods as models for advanced studies in evolution, physiology, behavior, ecology and conservation.
Prerequisites: Ecology (BIOLOGY 341) or its equivalent and at least one additional advanced biology course such as Genetics or Vertebrate Zoology.

## EVSS 628 Plant Ecology (4)

Plant ecology will explore the population ecology of plants covering the genetic, spatial, age, and size structure of plant populations. The focus will be on understanding the origin of these different kinds of structures, understanding how they influence each other, and understanding why they change with time.
Prerequisites: General Ecology (BIOLOGY 341) or permission of the instructor.

## EVSS 629 Conservation Biology (3)

A course exploring the origin, maintenance, and preservation of biodiversity at all levels: genetic, population, community, ecosystem, and biosphere. The focus will be on applying ecological, genetic and evolutionary principles to problems in conservation. Optional field trips will make use of the rich biota of the Charleston area.

Prerequisites: BIOL 341 (General Ecology) and either BIOL 311 (Genetics) or BIOL 350 (Evolution), or permission of the instructor.

## EVSS 630 Natural Resources Law and Policy (3)

This course examines the laws and policy that regulate and affect the use of natural resources. The course includes an introduction to the administrative law of federal agencies that regulate the use of public lands and resources.
Prerequisites: None

## EVSS 631 Pollution in the Environment (3)

Multidisciplinary study of fundamental physical, chemical, and biological processes that affect transport and fate of human-induced and natural pollutants in the environment. This course is for students who have strong interests in environmental sciences, with basic preparation in sciences such as chemistry, geology, and/or biology.

## EVSS 632 Social Science Methods in Environmental Studies (3)

This course will introduce students to social science methodologies used to understand humans' relationships to the environment. The course will provide a basic understanding of the practice of collecting both quantitative and qualitative social science data, developing mixed-methods or interdisciplinary projects, and train students on how to interpret such data.

## EVSS 633 Urban Policy (3)

This course will introduce students to the field of urban policy and will train students to critically analyze policy debates that directly impact city life. The course traces the major ideological shifts in urban policy over the past century, analyzes their historical and philosophical foundations and explores the relationship between urban change and policy formulation.

## EVSS 635 Land Use Law (3)

This course examines zoning and land use control in the United States and incorporates illustrations and cases from South Carolina in particular. It focuses on enabling legislation
for local governments, regulation, the process of development, eminent domain, contract and conditional zoning and enforcement and violation of land use regulations.

## EVSS 637 Wetlands Policy (3)

This course is intended to provide the student with a broad understanding of the social origins, philosophies and political, economic and cultural impacts of wetlands protection in the United States. Topics address the goals of and policymakers' approaches to wetlands protection.

## EVSS 638 Introduction to Hydrogeology (4)

Introduction to quantitative nature of water flow within geologic media. Discuss the significance of water flow theory and the dynamics of many natural flow systems in geologic settings. Quantitative analysis of water resources in a decisionmaking format. Lectures three hours per week; laboratory three hours per week.
Prerequisites: MATH 120 or 220 or equivalent; or permission of the instructor.

## EVSS 639 Wetlands and Watersheds (3)

Introduction to water flow and biogeochemical processes in wetland systems. Discuss the significance of hydrology in wetlands and importance of biogeochemical cycles on water quality in wetlands. Quantitative analysis of water budgets and biochemical processes in soils and water. Lectures and student-led seminars: three hours per week.

## EVSS 640 Earth Systems Science (3)

This course investigates the interactions among the atmosphere, ocean, ice, solid-Earth, and biological systems. Students study the evolution of solid Earth, the formation of the atmosphere and oceans, and the origin of life. Rate and scale of changes of the Earth's environment are examined through an analysis of changing climates. Finally, the course examines human evolution and technological development to gain an understanding of human impacts on the global environment.

## EVSS 641 Aqueous Geochemistry (4)

A quantitative study of equilibrium inorganic and organic geochemical reactions that control surface and groundwater composition. Geochemical modeling methods will be used to better understand the complex interactions between rock, sediment, and water. Lecture three hours per week; laboratory three hours per week.

## EVSS 642 Geological Applications of Remote Sensing (4)

Course will cover the fundamentals and applications of remote sensing. Topics include: remote sensing theory, data collection, reduction and application, computer software tools, data acquisition and ties to geographic information systems (GIS). The course emphasis is on environmental problems.

Prerequisite: Background or experience in remote sensing, or GEOL 314.

## EVSS 645 Coastal Issues and Processes (3)

This course provides an in-depth understanding of the coastal environment, including coastal policies and environmental issues that result from the activity of humans. Subjects include: origin of coastlines, physical processes, coastal hazards and coastal zone management.

## EVSS 646 Graduate Core Seminar (2)

This seminar course on environmental studies topics will offer an introductory review of the environmental studies discipline. Students will review recent scholarship, including primary sources, with an emphasis on interdisciplinarity, providing them an environmental studies overview.

## EVSS 649 Geographic Information Systems (4)

This course will cover spatial types and quality, data input operations, database management, data analysis, and software design concerns. We will also examine institutional and political concerns for using GIS. Computer-based GIS software (Unix, PC, and Mac) will be used throughout the course.
Prerequisites: Some computer experience necessary.

## EVSS 650 Energy Production and Resource Management (3)

A study of the nature of energy and scientific issues relating to its production, storage, distribution, and use from a physics perspective. Production methods to be studied include: hydroelectric, fossil fuel, fission, fusion, wind, photovoltaic, biomass and solar-dynamic. Scientific issues will be related to the cultural and philosophical framework surrounding energy infrastructure and policy.

## EVSS 656 Atmospheric Science (4)

An introduction to the study of the Earth's atmosphere. Topics include composition and distribution of the components of the atmosphere, atmospheric thermodynamics, synoptic meteorology, atmospheric aerosol, nucleation processes, microphysics of warm and cold clouds, cloud morphology, violent storms and artificial modification of clouds and precipitation.

## EVSS 657 Satellite Meteorology (3)

Satellite meteorology is the measurement of weather by sensors aboard Earth-orbiting satellites. Topics include satellite orbits and navigation; electromagnetic radiation; instrumentation; image interpretation; atmospheric temperature; winds, clouds, precipitation and radiation.

## EVSS 658 Climate Change (4)

An introduction to the study of the physics of the Earth's climate. Topics include climatic classification, the spectrum of radiation, absorption, scattering, transmission, radiation, the tropospheric balance, the energy balance at the Earth's surface, time variations in the energy balance, the atmospheric transport of energy, the atmosphere as a heat engine, CFCs and stratospheric ozone, the carbon cycle, other greenhouse gases, climate heating, integrated assessment of models and human activities affecting climate change. In addition, some
of the policy issues associated with such human activities will be addressed.

## EVSS 659 Environmental Statistics (3)

This course provides an introduction to environmental statistics and risk assessment. Topics include probability, correlation, regression, hypothesis testing, analysis of variance, model testing, residual analysis, and nonparametric models. Environmental applications will be provided throughout the course.
Prerequisites: Math 250: Statistical Methods I (or an equivalent college-level statistics course) or pass an entrance exam.

## EVSS 690 Internship (6)

## EVSS 691 Thesis (6)

## EVSS 693 Independent Study (1-4)

A directed study of an environmental issue in the area of policy or science. Topic and project outline must be approved by the Program of Study Committee. Repeatable up to six hours toward graduation.

## EVSS 695 Special Topics in Environmental Studies (3-4)

## EVSS 721 Aquaculture (3)

Principles and techniques of aquaculture, with emphasis on warm-water species that spend all or part of their lives in salt water. Status and potential of aquaculture, including discussions of established and candidate species. Design and management of aquaculture systems. Importance of water quality, feeding, and nutrition; diseases and predators; genetics and breeding; and economic considerations in aquaculture.

## EVSS 722 Marine Invertebrate Zoology (4)

A study of the functional morphology, life history, systematics, evolution and other selected aspects of the biology of marine invertebrates.

## EVSS 724 Ichthyology (4)

A study of fishes, emphasizing diversity and evolution, morphology, physiology, ecology, life histories, behavior, systematics and biogeography. Laboratory work will focus on groups important in the local fauna.

## EVSS 725 Marine Botany (4)

Introduction to taxonomy, morphology, phylogeny and ecology of marine plants. Major groups of planktonic and benthic algae and vascular plants from the coast of South Carolina are studied.

## EVSS 726 Fisheries Science (3)

A general introduction to methods of harvesting aquatic resources and collection and evaluation of biological data to effectively manage these resources. Topics include age and growth analysis; mortality, recruitment, and yield; production and early life history; stock assessment techniques; and a detailed study of certain important fisheries.

## EVSS 746 Aquatic Toxicology (3)

An introduction to assessing the effects of toxic substances on aquatic organisms and ecosystems. Topics include general principles of toxicology, fate and transport models, quantitative structure-activity relationships, single-species and community-level toxicity measures, regulatory issues, and career opportunities. Examples will be drawn from marine, freshwater and brackish-water systems.

# Master of Science in Historic Preservation 

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Allisyn K. Miller<br>Administrative Coordinator<br>843.937.9596<br>akmiller1@cofc.edu

## http://www.clemson.edu/caah/pdpla/historic-preservation/

## Program Description

The Graduate Program in Historic Preservation offers a 54 credit M.S. in Historic Preservation and is a joint degree program between the College of Charleston and Clemson University. Courses are offered at the studios and laboratories located at 292 Meeting Street near the College of Charleston's campus. The program is structured sequentially beginning with an initial core semester devoted to the analysis and documentation of historic sites, followed by a more advanced studio-focused semester organized around the development of a preservation project. After a summer internship, the second year is organized around laboratory and studio classes. A thesis is required.

The organizational structure of the degree program and the curriculum have been developed with the guidance of numerous professional organizations as well as the regional professional community in preservation and design.

## Minimum Admission Requirements

Applications made to this joint program through Clemson University's Graduate School
(http://www.clemson.edu/caah/pla/mhp/). The Graduate Record Exam is required.

## Transfer Credit Policy

The MSHP program does not allow automatic transfer of graduate credit. Students with graduate credit earned at another institution, in another department at Clemson University, or earned before admission to this program must have prior work evaluated for transfer credit. Requests for transfer credit to the program must be recommended and approved by the Program Director the dean of the Graduate School. You must make your request in writing for each course or credited activity to be transferred. Each request must be accompanied by an official transcript, catalog description and syllabus or other supporting documentation.

## Master of Science in Historic Preservation Curriculum

54-credit M.S. in Historic Preservation

## Semester I (Core Semester)

Documentation and Analysis: A semester of "core" curriculum in historic preservation that revolves around developing a deeper understanding of the historic fabric through a connected series of NCPE-mandated courses. 15 credits.
History and Theory of Historic Preservation (3)
American Architectural Styles (3)
Research Methods (3)
Historic Construction (3)
Investigation, Documentation and Conservation (3)

## Semester II (Advanced Semester)

Designing a Preservation Project: An "advanced" semester that focuses on putting together a historic preservation project against the backdrop of the legal and economic aspects of the historic fabric. 15 credits.
Approved Elective (3)
Preservation Studio/Lab (6)
Preservation Law and Economics (3)
Cultural Landscapes (3)

## Summer Internship

Summer Internship in Historic Preservation: A required noncredit internship offered through a variety of organizations and foundations, including the Historic American Building Survey (HABS), Historic American Landscape Survey (HALS) and the Historic American Engineering Survey (HAES), the National Trust, and local museums and foundations as well as preservation practitioners in America and Europe.

## Semester III (Conservation Semester)

Implementation/Intervention: A semester of more lab-based "conservation" studies focusing on the implementation and intervention of the preservation plan of semester II. At this point in the curriculum, students begin their thesis. 15 credits.
Advanced Materials and Methods (3)
Research Seminar (3)
Conservation Lab (6)
Approved Elective (3)

## Semester IV (Thesis Semester)

Thesis Research Writing: A final semester focusing on the completion of a thesis. 9 credits required, up to 12 credits may be taken.
Approved Elective (3)
Thesis in Historic Preservation (6)

## Historic Preservation Course Descriptions

## HSPV 520 Preservation Law and Economics (3)

Introduction to the legal framework of historic preservation, including constitutional law, cultural resources statutes and relevant local laws and mechanisms. Reviews pertinent
economic policies, including tax incentives. Material is targeted toward advocacy, to include property rights and fiscal impact issues. Students will pursue a research/ practical project of their choosing.

HSPV 605 American Architectural Styles 1650-1950 (3)
Survey of American architectural styles and the architects responsible for them, from the colonial period to our recent past. Emphasis is on identifying architectural elements that serve as clues in determining a building's architectural styles. Critical thinking regarding the complexities of form, content, culture and referents will be discussed.

HSPV 610 History and Theory of Historic Preservation (3)
A survey history of preservation that explores a variety of theoretical issues impacting the discipline and provide a basis for the critical evaluation of historic preservation projects.

HSPV 611 Research Methods in Historic Preservation (3)
Introduction to documenting and recording historic buildings and landscapes. Charleston and environs provide case study projects for archival research, field investigation and preparation of final documentation.

HSPV 612 Materials and Methods of Historic Construction (3)

Survey of traditional materials and methods of construction in America from the 18 th through the early 20th century. Scientific examination of historic construction in Charleston and environs provides case studies for this course.

## HSPV 680 Special Topics (3)

This course will be comprised of special topics related to the curriculum of the Graduate Program in Historic Preservation, primarily in the first-year schedule.

HSPV 800 Summer Internship in Historic Preservation (3-6)
Professional internships are available through a number of initiatives in Charleston as well as nationally. Up to six credits of approved internship in historic preservation are required during the course of the graduate program and can be completed in one summer of the program.

HSPV 802 Historic Preservation Research Seminar (3)
Advanced documentation and analysis of historic resources in preparation for thesis project.

## HSPV 803 Advanced Materials and Methods of Conservation (3)

Advanced study of historic building materials and conservation techniques.

## HSPV 804 Management and Administration of Historic

 Preservation (3)Praxis on the management of historic properties with particular stress on administering a preservation project in the field, and establishing a maintenance program for a historic property.

## HSPV 805 Preservation Studio (3)

Examines Charleston and its environs through the development of a comprehensive preservation project for a specific site and appropriate architectural designs. Includes studio design component.

## HSPV 810 Conservation Science Laboratory (6)

Focuses on conserving historic building and landscape materials such as wood, metals, glass, masonry, and interior fabrics. Case study work takes place on-site and in the laboratory. The course will include in-depth study of materials and their properties in order to diagnose deterioration.

## HSPV 880 Special Topics (3-6)

This course will be comprised of special topics related to the curriculum of the Graduate Program in Historic Preservation, primarily as part of the second-year schedule.

## HSPV 891 Thesis Research (6)

Application of independent research to the historic environment through a multi-media degree project focusing on Charleston and its environs, or other suitable historic sites. Thesis is presented to committee for preliminary review at mid-semester for the fourth semester, and presented to a jury at the end of the semester for final review.

# Master of Arts in History 

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Jason Coy<br>Program Director<br>843.953.8273<br>coyj@cofc.edu

## http:/history.cofc.edu

## Program Description

The Graduate School of the College of Charleston and The Citadel Graduate College offer a joint master of arts in history providing each student with advanced specialized work in one of three areas: United States history, European history or Asian/African/Latin American history. The program offers qualified holders of the baccalaureate degree the opportunity to pursue historical studies in the midst of some of America's richest historical treasures. The management of the program is vested in a joint program committee composed of representatives of the two history departments, including the director and the associate director. (The latter two positions rotate between the two institutions.) Diplomas and other documents will indicate that the program was a joint endeavor and will include the names of both institutions.

## Minimum Admission Requirements

## Degree-Seeking Students

- Submit a completed application form with a nonrefundable application fee of $\$ 50$.
- Submit one official copy of a transcript from each institution of higher learning attended, including documentation of graduation from an accredited four-year college or university.
- Submit three letters of recommendation, normally from former professors. Each referee should be as specific as possible in the analysis of the applicant's potential for academic success.
- Submit an official copy of test scores of the Graduate Record Examination or Miller Analogies Test (must be taken during the last five years). Applicants with exam scores taken through July 31, 2011 must have at least 500 on the verbal and between 4-6 on the writing assessment sections of the GRE. An applicant who fails to meet this score may be allowed to pursue coursework as a provisional student. Upon completion of nine semester hours with no more than three hours in independent study (HIST 770), and a minimum GPA of 3.25 , the test score may be waived. The student must make this request in writing to the Joint Program Committee. The minimum verbal score for the GRE taken on or after August 1, 2011 is 150 .
- Submit written evidence of applicant's ability to conduct research and present findings. Ideally, this requirement should be met by submission of a term paper, honors thesis, etc. from a graduate or upper-level course taken in college.
- Ordinarily, applicants are expected to have completed and passed at least 15 hours of undergraduate history courses beyond the introductory level.
- Applicants are expected to have a cumulative undergraduate GPA of at least 2.5 on a 4.0 scale and a 3.0 in the major.


## Non-Degree Students

- Submit a completed application form with a nonrefundable application fee of $\$ 45$
- Submit one official copy of a transcript from each institution of higher learning attended, including documentation of graduation from an accredited four-year college or university.
- With the approval of the director or associate director, non-degree students may be permitted to register for up to 12 semester hours of credit prior to applying for admission to the program. Non-degree students who have taken in excess of 12 semester hours of graduate courses in history must have permission of the Joint Program Committee to continue enrollment in a non-degree status. Courses taken in non-degree status may only be applied towards a degree with the approval of the Joint Program Committee.


## Application Deadlines

The Joint Program Committee will consider completed applications for the degree program on the following dates:

Summer \& Fall: March 1
Spring: October 15

## Plan of Study

In consultation with an advisor, each degree candidate will develop a plan of study, which includes a minimum of nine hours of coursework at both institutions. The plan of study must be submitted to The Graduate School in order to be approved for graduation.

## Courses

In addition to lectures and examinations, graduate courses will demand wide reading, thorough research, and advanced historical writing. Only graduate students will be automatically enrolled, but exceptional undergraduates upper division majors in history and related disciplines who have a minimum GPA of 3.40 in history courses - may be enrolled in 500-level courses. For this, however, they will need permission from the instructor and the Joint Program Committee. No more than two 500-level courses may be taken by an undergraduate, while 600-level and 700-level courses are for graduate students exclusively. Since juniors and seniors will not receive graduate credit for completing these courses, the amount of work required of them will not be as great as that expected of the graduate students. The qualitative expectations remain the same for all students.

## Master of Arts in History Degree Requirements

The Master of Arts in History is conferred upon those candidates who successfully complete an approved program of study consisting of a minimum of 33 semester hours of graduate credit with a cumulative GPA of 3.0. The distribution of courses follows this general scheme:
Major concentration 18 hours*
Minor concentration (6 hours)
Course in third concentration (3 hours)
Historiography 3 hours
Electives 3 hours**
*Includes either a thesis (6) or two research seminars (3, 3), both of which should be taken in the major concentration when possible.
**In history or a related discipline in the humanities or social sciences. Non-history courses require prior approval of the program director.
All students are encouraged to attain proficiency in a foreign language. There is no formal requirement for students in the program to demonstrate language proficiency at a certain level. Depending upon the program, however, a candidate may be required by the advisor to demonstrate mastery of an appropriate foreign language, indicated by the satisfactory use of source material or literature in the relevant foreign language in seminar or research work.
A comprehensive written examination is prepared and administered by the director and associate director and is required of students pursuing the non-thesis track. They are to be taken after the completion of 27 hours of coursework. This comprehensive examination is a thorough review of the fields covered in the student's program. The examination committee is composed of faculty from both institutions. Those who intend to write a thesis must first have a proposal approved by a thesis committee and by the Joint Program Committee. A satisfactory oral defense is also required before final certification for the degree. Non-thesis track students must also satisfactorily complete two 700-level research seminars before final certification for the degree.

## African American Concentration

Students opting to add a concentration in African American history must meet all the normal requirements for the master's degree. In addition, they must complete one of the two courses of study below and all courses chosen must meet the approval of the graduate program director. Because this concentration consists of fewer than 18 credit hours, it will not be listed on students' transcripts.

## Thesis Option

6 hours in African American oriented history
3 approved hours in another discipline
6 hours in an African American oriented thesis

## Non-Thesis Option

9 hours in African American oriented history
3 approved hours in another discipline
3 hours in African American oriented independent study or similar (i.e. research seminar)

Three hours of independent study on an African American topic may be included as part of the nine hours of coursework.

## History Course Descriptions

## HIST 502 Colonial America and the American Revolution to 1789 (3)

The motives of colonization; the evolution of self-government; the extension of the frontier; economic, social, and religious life; imperial rivalries; the causes of the Revolution; the War for American Independence; problems of the Confederation; and the establishment of the Federal Union.

## HIST 504 Civil War and Reconstruction (3)

The political, economic, diplomatic and military history of the United States, between 1850-1877, emphasizing the forces that tended to bind or disrupt the Union, including a detailed account of the war and its consequences.

## HIST 506 The U.S. in the 20th Century (3)

A study of the efforts to fulfill the democratic vision in the era of wars and depressions, accelerating technological innovation, material progress and cultural change.

## HIST 521 The American South (3)

The political, social and economic development of the South from the 1820s to the present, with emphasis on the region within the national context as one of both change and continuity.

## HIST 522 South Carolina History (3)

A survey of the political, economic, social and intellectual development of South Carolina from its discovery to the present, with emphasis on the relation of the state to the South and to the nation.

## HIST 523 Afro-American History (3)

An introduction to the history of black Americans in the United States, with emphasis on the social forces underlying transitions from West Africa to the New World, from slavery to freedom, and from rural to urban life. Topics to be discussed include the Atlantic slave trade, American slave societies, maroon communities, free blacks in the antebellum United States, Reconstruction and free labor, colonization, emigration and urban migrations.

## HIST 532 Ancient Greece (3)

Greek civilization from its beginning to Alexander the Great. Emphasis on political, economic, social and intellectual movements.

## HIST 533 Ancient Rome (3)

Roman history from its beginning until the Age of Constantine. Emphasis on political and social development in the Republic and the early empire.

## HIST 535 Medieval Europe (3)

European social, political, economic, and religious institutions and cultural and intellectual phenomena in the light of the
changing historical environment from the end of the Ancient World to the Renaissance.

## HIST 537 Renaissance and Reformation (3)

The Renaissance as a European-wide movement emanating from the Italian peninsula; the crisis of the church medieval and the rise of the Renaissance papacy; Humanism, with special emphasis on the great painters, architects and sculptors such as Giotto, Brunelleschi, Donatello, Botticelli, da Vinci, Raphael and Michelangelo; the Renaissance city-states; Machiavelli and the Renaissance monarchies of France, England, Spain and the Holy Roman Empire; the continuing crisis of the church medieval and the religious upheavals of Protestantism; the work of Luther, Calvin, Zwingli and the Anabaptists; the Catholic Reformation; the age of civil and religious wars.

## HIST 541 Enlightenment and French Revolution (3)

The major social, political and cultural changes in Europe from the death of Louis XIV to the fall of Napoleon. Topics include the intellectual history of the Enlightenment, the causes of the Revolution, the development of radical ideologies, the French impact on Europe and the achievements of Napoleon as civil administrator, military strategist and commander.

## HIST 542 Nineteenth-Century Europe (3)

Europe from Waterloo to Sarajevo; political reaction and reform; the Industrial Revolution with its economic, social and political effects; nationalism and the renewed interest in imperialism; other factors in international rivalries and the coming of World War I.

## HIST 543 Twentieth-Century Europe (3)

An examination of the origins and consequences of two World Wars on the major European states; the political, social and economic development of those states and their relative positions today.

## HIST 545 History of Modern Russia (3)

History of the development of Tsarist absolutism under the Romanov dynasty and of the religious, social and economic institutions of the Tsarist state. Intensive treatment of the 1917 Revolution and the institutional development of the Soviet Union to world power status.

## HIST 551 Women in the Western World (3)

An examination of the ideas, institutions, and events in Western Civilization which specifically affected women. Lectures and readings will be organized topically rather than geographically or chronologically. Areas to be examined include religion, education, sex and marriage, the family, work and feminist and suffragist movements.

## HIST 562 Colonial Latin America (3)

A survey of Spanish and Portuguese colonial America to 1825. Topics include native populations on the eve of conquest; exploration and conquest by Europeans; the development of multiracial societies; the colonial economies; the institutions of Ibero-American empires; the social,
economic and intellectual roots of revolution; independence movements.

## HIST 563 Modern Latin America (3)

A survey of Spanish and Portuguese America since the wars for independence. Topics include the aftermath of the independence movements, incorporation into the international economy, changing social organization, race relations, the search for political stability, the role of the military, 20th century revolutionary movements and intellectual currents.

## HIST 572 Pre-Colonial Africa (3)

An introduction to the pre-colonial history of sub-Saharan Africa. Special focus on the growth of Islam in West Africa, the East African city-states and kingdoms and the upheaval in 19th-century southern Africa. African slavery and the slave trade are also considered.

## HIST 573 Modern Africa (3)

A history of the development of Africa during the modern period, including European penetration, the Colonial era, African resistance and independence and contemporary issues.

## HIST 577 Modern Middle East (3)

Tradition, modernization, and change in the contemporary Islamic World. The impact of nationalism, secularism and Westernization in the Middle East, from the disintegration of the Ottoman Empire and the emergence of successor states, to the Arab-Israeli conflict, the oil crisis and Great Power confrontation.

## HIST 582 China to 1800 (3)

A survey of traditional Chinese history from earliest times to 1800. Emphasis is on intellectual development against the background of social, political and economic transformations.

## HIST 583 Modern China (3)

A study of Chinese history from 1800 to the present, emphasizing the transformation of the Confucian universal empire into a modern national state. The course focuses on the problems of imperialism, nationalism and revolution, the rise of communism, the proletarian Cultural Revolution and the Four Modernizations in post- Mao China.

## HIST 586 Japan to 1800 (3)

A survey of the political, economic, and cultural development of Japan from earliest times to 1800, with emphasis on the borrowing and adaptation of Chinese culture and the development of a unique Japanese civilization.

## HIST 587 Modern Japan (3)

A study of modern Japanese history from 1800 to the present, with emphasis on the creation of the modern state, the impact of Western civilization on Japanese culture, Japan's experience with liberalism and militarism and imperialism and the postwar transformation.

## HIST 590 Special Topics in U.S. History (3)

Examples include: Turning Points in American History; the Progressive Era; The Social and Cultural Transformation of the 1920s.

HIST 591 Special Topics in European History (3)
Examples include: Georgian Britain; Edwardian Britain; the European Left and Labor.

## HIST 592 Special Topics in Asian/African/ Latin American

 History (3)This course concentrates on an important historical period or topic within one of four principal regions: Latin America and the Caribbean, Asia, Africa or the Middle East.

HIST 593 Special Topics in Peace, War, and Diplomacy (3) Examples include: World War I; the Vietnam War; Diplomacy of the American Civil War.

## HIST 610 Special Topics in U.S. History (3)

Examples include: the Depression and New Deal; Business, Labor, and Economic History; Social and Cultural History, etc.

## HIST 620 Special Topics in Lowcountry Studies (3)

An interdisciplinary course organized around a specific topic, such as education, the environment of the Lowcountry, plantation culture, Gullah or the Caribbean origins of the Lowcountry. This interdisciplinary course will allow a student to explore an area of specific interest.

HIST 630 Special Topics in Peace, War, and Diplomacy (3)
Examples include: The Diplomacy of the American Revolution; Disarmament during the 1920s. This course may be offered as HIST 660 (3) for topics in European history and as HIST 680 (3) for topics in Asian, African or Latin American history.

HIST 640 Special Topics in European History (3)
Examples include: Social and Cultural History; the Scientific Revolution; the Age of Louis XIV.

## HIST 650 Special Topics in British History (3)

Examples include: The English Reformation, the English Civil War, the Victorian Age.

HIST 670 Special Topics in Asian/African/ Latin American History (3)
A course that concentrates upon an important historical period or topic within one of four principal regions: Latin America and the Caribbean, Asia, Africa, or the Middle East.

HIST 691 Historiography (3)
A core course, it examines various methods of gathering historical data and issues of conceptualization and interpretation. The course thus seeks to develop in students critical awareness and expertise based on familiarity with a variety of historical techniques, methods, and concepts.

HIST 692 Teaching History and Social Sciences (3)
Organization, methods and procedures for teaching history and the social studies in the secondary and middle schools.

## HIST 693 Historical Geography (3)

A study of differing economic and social patterns, with emphasis on such fundamental determinants of economic activities as climate, raw materials, locations and the interrelationships of these to each other and to world affairs generally. Construction and use of simplified models and diagrams to illustrate the foregoing are a basic part of the course.

## HIST 710 Research Seminar in U.S. History (3)

A topical seminar that focuses on a central historical problem with a major research paper required. Primary sources are utilized whenever possible.

## HIST 720 Research Seminar in Lowcountry Studies (3)

An interdisciplinary seminar designed to acquaint students with the historical methods necessary to successfully pursue a research topic, including an introduction to primary sources.

HIST 740 Research Seminar in European History (3)
A topical seminar that focuses on a central historical problem with a major research paper required.

## HIST 760 Research Seminar in Asian/ African/Latin American History (3)

A topical seminar that focuses on a central historical problem within one of four principal regions: Latin America and the Caribbean, Asia, Africa or the Middle East. A major research paper is required.

HIST 770 Independent Study in History (3)
Repeatable once.
HIST 801 Master's Thesis (3)
HIST 802 Master's Thesis (3)

# Master of Education in Languages 

Robyn Holman<br>Program Director<br>843.953.5459<br>holmanr@cofc.edu

## http://lcwa.cofc.edu/grad-progs

## Program Description

The School of Languages, Cultures, and World Affairs and the School of Education, Health, and Human Performance jointly offer a Master of Education in Languages. This degree program is designed to broaden the content area knowledge, strengthen the language and language teaching skills, and satisfy the professional development needs of practicing teachers. It may also respond to the interests of other language professionals or qualified individuals desiring to pursue advanced studies in language and linguistics. This program provides a solid background for future doctoral study in language education.

The program is made up of two major components: core courses in applied linguistics, teaching and research methods; and language specific courses in Spanish and ESOL. Candidates will also complete various capstone experiences. This is a part-time program that generally offers the student one or two courses per semester, including summer. Students are asked to choose an advisor early in their course of study. The degree must be completed within six years of the entrance date. Courses in this program are taught by full-time faculty who hold terminal degrees in their fields and have extensive teaching backgrounds, which often include public or private school experience at the secondary level.

## Minimum Admission Requirements

Language teachers holding a valid teaching certificate from any state will be admitted as long as they have a bachelor's degree or its equivalent in the language that they teach with a GPA of 2.5 or better on a 4.0 scale. The Graduate Record Examination (GRE) exam is not required. Other applicants will be considered on a case-by-case basis by the program steering committee, which will apply the following criteria:

- A bachelor's degree from an accredited institution;
- A minimum GPA of 2.5 ;
- At least 30 hours of undergraduate coursework, or an approved equivalent, in the relevant modern language;
- Evidence of a command of English (if English is not the primary language of the applicant, a TOEFL score of 550 or greater is required);
- Two letters of recommendation
- Submit an application with a nonrefundable fee of $\$ 50$.
- Official transcripts of all undergraduate and graduate coursework
- A copy of the applicant's valid teaching certificate (if applicable).


## Application Deadlines

Fall: July 1
Spring: November 1
Summer: April 1
All application materials should be submitted to:
The Graduate School of the College of Charleston
66 George Street
Randolph Hall, Suite 310
Charleston, S.C. 29424

## Provisional Admission

Students who do not meet the requirements for admission may be admitted provisionally until the deficiencies are corrected. Conditions of provisional acceptances that lead to regular degree status will be clearly outlined for such applicants by the steering committee.

## Non-Degree Status

Teachers seeking re-certification credit or other qualified individuals wishing to take coursework may be admitted as non-degree-seeking students. Advanced undergraduates may, under certain conditions, request permission to enroll in M.Ed. classes (6-hour limit). Non-degree-seeking students who later wish to be admitted to the degree program may apply up to six semester hours of credit taken in non-degree status.

## Degree Requirements

The M.Ed. in Languages degree is awarded to candidates who successfully complete an approved program of study consisting of 36 hours of graduate credit with a cumulative GPA of 3.0. At least 27 of the 36 hours must be taken at the College of Charleston. In addition, candidates will complete the master's capstone experience as identified in the specific requirements listed below.

## Transfer Credit Policy

An applicant or student of the M.Ed. in Languages program can seek approval from the Program Director to accept up to nine transfer credit hours. These courses must have a grade of B or higher, and can count toward the M. Ed. in Languages degree requirements. Courses with a grade of "Pass" or "Satisfactory" will not be accepted. These courses must be catalog courses and not professional development courses to count in this program.

## Professional Development for Certified Teachers

Certified educators can enroll in professional development courses through the School of Education, Health and Human Performance Office of Professional Development in Education (OPDE). These courses, known as Professional Development Courses (EDPD) are used to modernize instructional strategies and offer content enrichment opportunities while leading to recertification points and pay scale advancements. These Professional Development credits offered through OPDE do not count toward the completion of an advanced degree such as the Master of Education or Master of Arts in Teaching. For more information regarding professional development courses, contact the OPDE Office at 843.953.7651.

Please note that EDPD courses differ from Catalog Courses. A Catalog Course has been approved as part of a course of study in a College of Charleston graduate-level program. These courses are ones that are offered through a contract course arrangement and count towards a master's degree in a specific discipline area (i.e.: M.A.T. and M.Ed. programs). They are awarded graduate credit, reviewed, and accepted by the specific discipline/curriculum involved.

## Master of Education in Languages Core Courses

LALE 601<br>Applied Linguistics<br>LALE 602 Advanced Methods of Second Language Teaching<br>LALE 603 Second Language Acquisition<br>EDFS 635<br>EDFS 687<br>Introduction to Education Technology (or another approved intermediate or advanced technology course)

## Language Specific Courses

## Spanish Concentration

Students will take 15 hours of coursework in the Spanish language, literature, and culture. All Spanish courses are taught in Spanish.

## ESOL Concentration

Students will take 15 hours of ESOL courses, which generally include the following:

EDFS 670 Principles and Strategies
EDFS 671 Reading and Writing
EDFS 672 Linguistics and Cultural Diversity
EDFS 673 Assessment
EDFS 680 Teaching English Through the Content Areas
Note: Any concentration consisting of fewer than 18 credit hours will not show on a student's transcript.

## Master of Education in Languages Capstone Experiences

Students choose from three options to meet this 6-hour requirement: thesis, an action research project or two electives related to the student's area of interest.
All students must fulfill a general requirement of at least 50 hours of field experience (practicum). For ESOL students, the field experience may be the practicum course EDFS 704.

At the conclusion of the program all students will either pass a comprehensive exam or submit a professional portfolio.

## Languages Course Descriptions

## EDFS 635 Educational Research (3)

An in-depth study of methods used in different types of educational research. Includes involvement of the student in the process of educational research design, implementation, reporting, and evaluation. (fall, spring and summer)

EDFS 670 Principles and Strategies for Teaching English to Speakers of Other Languages (Esol) (3)
A survey course intended to provide pre-K through grade 12 educators with knowledge of the principles, underlying methodologies and techniques for promoting acquisition of a second language through academic content. The main focus is to demonstrate a variety of instructional strategies that can benefit all students in a multicultural classroom.

EDFS 671 Teaching Reading and Writing to K-12 Speakers of Other Languages (3)
This course is intended to provide a theoretical foundation for the teaching of reading and writing English to limited English proficient (LEP) learners in K-12 schools. Participants will learn about dialogue journal writing, reading/writing workshops, family literacy, writing for publication and writing in the content areas.

## EDFS 672 Linguistic and Cultural Diversity in Education (3)

This course provides preK-12 educators with an understanding of issues affecting linguistically and culturally diverse learners. Topics include analysis of language and its development in diverse settings, history of bilingual education, cultural/learning style preferences, cultural influences in curriculum and materials, legal issues related to serving limited English proficient learners, ESOL program development, and home-school collaboration.

## EDFS 673 Assessing Student Performance (3)

This class will provide a theoretical foundation for gathering and analyzing the data necessary for effective assessment of instruction serving language minority learners. Students will learn to question what kinds of data are collected, why and how data are used and what kinds of data may be overlooked in the assessment process.

## EDFS 680 Teaching English Through the Content Areas (Or Content Modification for Esol Students K-12 (3)

This course will focus on successful techniques for teaching both content and related academic language to all students. Students will learn how to make modifications for limited English proficiency students by using several techniques, including graphic organizers, scaffolded lessons, cooperative learning, alternative assessment and multicultural activities.

## EDFS 687 Introduction to Educational Technology (3)

This is an introductory course for pre-service and in-service teachers using technology in the classroom. Students become familiar with application software such as word processing, databases and hypermedia, desktop publishing and telecommunications, and learn to evaluate hardware and software. (fall, spring and summer)

## LALE 601 Applied Linguistics (3)

The course explores the different areas that comprise the field of Applied Linguistics with the goal of observing how they inform second language teaching and learning. It addresses questions about the complexities of L2 learning, as well as
issues surrounding the education and training of second language teachers.

## LALE 602 Advanced Language Teaching Methodology (3)

The course incorporates the latest research findings on foreign language pedagogy and theory. Students will create lesson plans, units and activities based on specific aspects of foreign language teaching. Class sessions involve discussion of assigned readings and application of the content of the readings to teaching diverse learners.

## LALE 603 Second Language Acquisition (3)

The course introduces the field of second language acquisition from a theoretical and methodological perspective. Students will explore the most important linguistic, psychological and social influences that affect the rate and course of second language acquisition. The course draws comparisons between the acquisition of a first and second language. Students will analyze actual second language learner data.
Prerequisites: LALE 601.
LALE 690 Special Topics in Language Education (3)
The course examines current issues in language teaching such as FLES, immersion programs, AP training and standards, from both a theoretical and practical viewpoint. Course content changes regularly.

## LALE 700 Thesis Or Action Research (3)

A thesis or Action Research project is completed under the guidance of a graduate faculty member and defended before a graduate committee.
Prerequisites: Acceptance of the research proposal by the student's project director and program director.

## SPAN 590 Special Topics (3)

Subjects to be announced. Course may be repeated for credit as topics change.

## SPAN 614 Topics in Spanish Culture and Civilization (3)

An intensive exploration and analysis of the culture of Spain through the study of selected topics in history, science, philosophy, the arts and popular culture. Such topics will be approached through the study of primary and secondary texts, artistic works and through film. The goal of this course is to prepare teachers to incorporate and adapt a wide variety of cultural aspects of Spain into their lesson plans as well as to provide an understanding of central aspects of post-1700s Spain.

## SPAN 615 Topics in Latin American Culture and Civilization (3)

An Intensive exploration and analysis of Spanish- American culture and civilization through the study of selected topics in history, film, the arts and popular culture. This course prepares teachers to incorporate and/or adapt cultural aspects that are appropriate for middle and high school curricula.

SPAN 624 Us Latinos/As Literatures and Cultures (3)
An in-depth study of topics in U.S. Latino/a literature and culture focusing on Mexican- Americans, Puerto Ricans and

Cuban-Americans. Content includes history, literacy production and cultural manifestations within contemporary theoretical concepts.

## SPAN 630 Seminar in Hispanic Studies (3)

An in-depth study of topics in Hispanic literature, linguistics and/or cultures. This course may be repeated for additional credit, as the topics change.

## SPAN 655 Tyranny in Spanish American Film and Literature (3)

An insightful view of the Southern Cone's recent political history as seen through representative works of contemporary Spanish American literature and film.

## SPAN 671 Youth Literature in Spain (3)

New directions in analyzing youth literature in Spain. Attention is devoted to such topics as the treatment of death, race, and drugs in literature at the turn of the century. Students will explore the questions of identity posed in each work covered.

## SPAN 682 Spanish Oral Proficiency (3)

Emphasis is on practical activities designed to increase students' level of proficiency and their understanding of the ACTFL Proficiency Guidelines. Assignments focus on analyzing oral skills, diagnosing problem areas, and on applying proficiency strategies to personal and professional needs.

# Master of Science in Marine Biology 

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Willem Hillenius<br>Chair, Biology<br>843.953.5504

## Grice Marine Laboratory

843.953.9200

## http://marinebiology.cofc.edu

Located at Ft. Johnson on James Island, about 10 miles from the main campus, the Grice Marine Laboratory houses the Graduate Program in Marine Biology, as well as classrooms, research laboratories, faculty offices, an aquarium room and a research collection of marine invertebrates and fishes.
Adjacent to the College of Charleston facilities at Fort Johnson, the following facilities are all available to graduate students, staff and visiting scientists for research and training purposes: the Charleston Laboratory of the National Ocean Service (NOS), National Oceanic and Atmospheric Administration (NOAA), the Marine Resources Research Institute (MRRI) of the South Carolina Department of Natural Resources and the 78,000-square-foot, jointly administered Hollings Marine Laboratory.

## Program Description

The Graduate School of the College of Charleston offers a graduate program leading to a Master of Science in marine biology. Several participating institutions contribute faculty and support to the program, including the Marine Resources Research Institute of the South Carolina Department of Natural Resources, the Charleston Laboratory of the National Ocean Services (NOAA), the Medical University of South Carolina, the Hollings Marine Laboratory, and The Citadel. The M.S. degree is awarded by the College of Charleston, and students use facilities and resources of all the participating institutions. The program is research-oriented, and a thesis is required of all students. Because of the broad scope of faculty interests and facilities, an extremely wide variety of research and training opportunities are available in such areas as marine genomics, ecology, fisheries biology, marine biodiversity (systematics, phylogeny, biogeography), evolutionary biology, cell and molecular biology, physiology, microbiology, marine conservation, oceanography, aquatic toxicology, mariculture, marine mammal biology, and biomedicine/biotechnology.

Student offices and research spaces are provided in the Marine Resources Research Institute, Hollings Marine Laboratory, and Grice Marine Laboratory of the College of Charleston. In addition, an excellent Marine Resources Library, staffed by

College of Charleston librarians, is located at the Ft. Johnson complex.

## Assistantships

A number of research and teaching assistantships as well as six summer fellowships are awarded annually in the graduate program. In addition, two full two-year fellowships in marine genomics are awarded annually to two new students. For information on additional financial assistance, please refer to the financial information section of this catalog.

## Minimum Admission Requirements

- A completed application form with a nonrefundable application fee of $\$ 50$.
- A statement of goals.
- Résumé
- One official transcript from each institution of higher learning attended.
- An official copy of scores from the general test of the Graduate Record Examination.
- Three letters of recommendation from persons closely associated with previous work related to the discipline.
- A bachelor's degree.
- Evidence of a command of spoken and written English (TOEFL score).
- Evidence of background in the sciences:
- Twenty semester hours of upper division biological courses, including a course in cellular or molecular biology (or the equivalent) and a course in ecology (or the equivalent).
- Chemistry - two courses in organic chemistry or one course in analytical chemistry (beyond first-year chemistry).
- General physics - two courses
- Calculus - one course
- Students with otherwise outstanding academic preparation who may lack one of the required courses may be admitted but could be required to complete the missing courses.
Note: Application for the fall with all supporting documents must be submitted no later than February 1. Notification of acceptance is normally made within six weeks. Spring admissions are occasionally made; the deadline for spring applications is November 1.


## Master of Science in Marine Biology Degree Requirements

## Courses: A Minimum of 30 Semester Hours Is Required as Follows:

- Items a-e constitute the core (required) curriculum*
(a) BIOL 600 Physiology and Cell Biology of Marine Organisms (4)
(b) BIOL 601 Ecology of Marine Organisms (4)
(c) BIOL 610 Physical Oceanography (4)
(d) BIOL 611 Biometry (4)
(e) BIOL 620 and BIOL 621 Graduate Core Seminars (2)
(f) BIOL 650 Seminar in Marine Biology (1)
(g) Elective Graduate Courses, of which at least one must be organism-level (7-8)
(h) BIOL 700 Thesis (4)
- Time Limit Requirements - All degree requirements for the M.S. degree in marine biology must be completed within four years. Extensions beyond the four-year time period must be approved in writing by the Marine Biology Graduate Council and the dean of graduate studies.
- By the second semester in the program, a graduate student is expected to choose a major professor, establish a graduate committee, and file a plan of study in the program's office at Grice Marine Lab. This plan must be approved by the student's committee.
- Oral Comprehensive Examination - Successful completion of an oral comprehensive examination is required. This exam must be taken no later than 45 days after completion of the second semester of courses. Successful completion of the comprehensive exam formally admits students to candidacy for the degree. The student must maintain continuous enrollment in the program. Continuous enrollment can be maintained by enrollment in at least one graduate course per semester. This will entitle the graduate student to a valid ID card, full service of the campus library, and such support from faculty and facilities of the program as the plan of study authorizes.
- Thesis Proposal - A formal written presentation of the research problem is required. This presentation to the student's committee will include a detailed description of the scope of the research, the method(s) of approach and a timetable. The proposal is expected by the time the student has completed the first 15 months of the program.
- Thesis - A formal written presentation of the student's research, the thesis, is required. The student's committee reviews the thesis and, if it is satisfactory, formally certifies its acceptance following an oral presentation and defense of the thesis by the student. A description of the required format for the thesis is available to students from the program office at Grice Marine Laboratory.
All degree requirements must be met in accordance with specified university and program regulations.
Note: Acceptance of transfer credit(s) for fulfillment of the requirements above will be determined by the Marine Biology Graduate Council. No more than six semester hours of transfer credit is normally allowed. Credits to be applied toward the degree remain valid for five years from the date of enrollment. In unusual circumstances, exceptions may be made by the Marine Biology Graduate Council and with the approval of the dean of the Graduate School. Students must maintain at least a 3.0 grade point average on
a 4.0 scale. Courses with grades of " $S$ " or " $P$ " are not transferable unless the student or department provides written documentation from the instructor(s) of the course, a department administrator, or the registrar at the transfer institution that the " $S$ " or " $P$ " graded course was equivalent to at least a B grade.


## Marine Biology Course Descriptions

## BIOL 502 Special Topics in Marine Biology (1-4)

Special studies designed to supplement regular offerings made in the program or to investigate an additional, specific area of marine biological research. Previous special topics courses have included Marine Genomics, Coral Reef Biology, Biology of Deep-Sea Organisms, and Marine Biodiversity.

## BIOL 503 Special Topics in Ecology (3-4)

Investigation of advanced specific areas of ecology beyond General Ecology (BIOLOGY 341). Examples of offerings may include Marine Microbial Ecology, Benthic Ecology, Community Ecology, and Aquatic Pollution.
Prerequisites: BIOLOGY 341 (General Ecology) or permission of the instructor.
Note: This course may sometimes include a lab, in which case the number of credits will be four.

## BIOL 510 Field Methods in Marine Ecology (2)

The use of ecological theory and methods to obtain and interpret experimental data gathered in the local marine environment. Emphasis is placed on an intensive class project. Lecture and laboratory total four hours per week.

## BIOL 600 Physiology and Cell Biology of Marine Organisms (4)

A study of the regulatory mechanisms found in marine organisms, especially as these relate to interactions between the organism and the environment. Mechanisms will be discussed at the organismal, organ-system, tissue, and cellular levels. Lectures three hours per week; laboratory three hours per week.

## BIOL 601 Ecology of Marine Organisms (4)

The study of living organisms in the marine environment population and community ecology, reproduction and life histories, productivity, evolution, and biogeography. A broad overview of these elements is followed by detailed consideration of major coastal and oceanic ecosystems around the world. Lectures three hours per week; laboratory three hours per week.

## BIOL 610 Physical Oceanography (4)

A study of the physics and chemistry of ocean and estuarine waters, circulation, waves, and tides. Lecture and laboratory work emphasizes the interrelationships of physical, chemical, geological and biological processes in the sea. Lectures three hours per week; laboratory three hours per week.

## BIOL 611 Biometry (4)

A broad treatment of statistics concentrating on specific statistical techniques used in marine biological research. Topics covered include sampling procedures and analysis of
distributions (binomial, poisson and normal), hypothesis testing and estimation with emphasis on analysis of variance and experimental design (Latin-square, nested, randomized block, and factorial), analysis of frequencies, regression, and correlation. Several nonparametric and multivariate methods that are pertinent to research in the marine biological science are also discussed. Emphasis is on application of statistical techniques and not theory; therefore, a knowledge of mathematics through calculus is expected. Lectures three hours per week; laboratory three hours per week.

## BIOL 614 Environmental Immunology (3)

This course, directed at graduate and advanced undergraduate students, addresses the role of the immune system in maintaining the health of human and wildlife populations. Lectures and independent reading followed by classroom discussion build skills in critical analysis of current literature in immunotoxicology, clinical and comparative immunology.

## BIOL 618 Marine Molecular Ecology (4)

This course is designed to introduce you to genetic tools which are available, practical, and useful for particular questions - and apply their analyses to marine ecology and evolution. In particular, population genetics, phylogenetics, and molecular evolution will be used to elucidate larval dispersal, historical demography, life history, speciation, and conservation.

## BIOL 620 Graduate Core Seminar (1)

Seminars on contemporary topics in marine biology acquaint students with the variety of disciplines and techniques available to scientists working in the marine environment. Designed especially to stimulate new-to-the-program students to choose thesis topics. Two hours per week. (620-fall, 621spring)

## BIOL 621 Graduate Core Seminar (1)

Seminars on contemporary topics in marine biology acquaint students with the variety of disciplines and techniques available to scientists working in the marine environment. Designed especially to stimulate new-to-the-program students to choose thesis topics. Two hours per week. (620-fall, 621spring)

## BIOL 627 Marine Tetrapod Biology (4)

This lecture, laboratory, and field course emphasizes both the diversity and common themes of the physiological, behavioral, and anatomical adaptations that characterize certain lineages of reptiles, birds, and mammals that exploit a wide array of marine habitats. Highlighting the faunas of South Carolina, we will evaluate marine tetrapods as models for advanced studies in evolution, physiology, behavior, ecology, and conservation.
Prerequisites: Ecology (BIOLOGY 341) or its equivalent and at least one additional advanced biology course such as Genetics or Vertebrate Zoology.

## BIOL 628 Plant Ecology (4)

Plant Ecology will explore the population ecology of plants covering the genetic, spatial, age, and size structure of plant populations. The focus will be on understanding the origin of
these different kinds of structures, understanding how these influence each other, and understanding why these change with time.
Prerequisite: General Ecology (BIOLOGY 341) or permission of the instructor.

## BIOL 629 Conservation Biology (3)

A course exploring the origin, maintenance, and preservation of biodiversity at all levels: genetic, population, community, ecosystem and biosphere. The focus will be on applying ecological, genetic, and evolutionary principles to problems of conservation. Optional field trips will make use of the rich biota of the Charleston area.

Prerequisites: BIOLOGY 341 (General Ecology) and either BIOLOGY 305 (Genetics) or BIOLOGY 350 (Evolution), or permission of the instructor.

## BIOL 630 Marine Invertebrate Zoology (4)

A study of the functional morphology, life history, systematics, evolution, and other selected aspects of the biology of marine invertebrates. Lectures three hours per week; laboratory three hours per week.

## BIOL 632 Ichthyology (4)

A study of the biology of fishes, emphasizing diversity and evolution, morphology, physiology, ecology, life histories, behavior, systematics, and biogeography. Laboratory work focuses on groups important in the local fauna. Lectures three hours per week; laboratory three hours per week.

## BIOL 635 Marine Botany (4)

Introduction to taxonomy, morphology, phylogeny, and ecology of marine plants. Major groups of planktonic and benthic algae and vascular plants from the coast of South Carolina are studied. Lectures three hours per week; laboratory three hours per week.

## BIOL 640 Applied and Environmental Microbiology (4)

A lecture and laboratory study of the special applications of microbiology to domestic water and waste water and solid wastes, food and dairy products, and industrial processes. Includes the microbial distribution and its role in various marine and freshwater, terrestrial, animal, and product environments. Lectures three hours per week; laboratory three hours per week.

## BIOL 641 Marine Parasitology (4)

The morphology, life cycles, ecology, physiology, and pathogenic effects of animals parasitic in or on marine hosts are considered. The parasites to be studied include protozoa, helminths, arthropods, and other miscellaneous groups typical of the marine environment. The principles and practice of parasite taxonomy and evaluation, along with morphologic and physiologic studies, are emphasized in the laboratory. Lectures three hours per week; laboratory three hours per week.

## BIOL 643 Fisheries Science (3)

A general introduction to methods of harvesting aquatic resources, and collection and evaluation of biological data to effectively manage these resources. Topics include age and growth analysis; mortality, recruitment and yield; production and early life history; stock assessment techniques; and the detailed study of certain important fisheries. Lectures three hours per week.

## BIOL 644 Aquaculture (3)

Principles and techniques of aquaculture, with emphasis on warm-water species that spend all or part of their lives in salt water. Status and potential of aquaculture, including detailed discussions of established and candidate species. Design and management of aquaculture systems. Importance of water quality, feeding and nutrition, diseases and predators, genetics and breeding and economic considerations in aquaculture. Lectures three hours per week.

## BIOL 645 Systematic Biology (3)

An in-depth coverage of the principles of systematics with emphasis on reconstruction of relationships and evolutionary history of organisms. Topics include current theories of systematic and evolutionary biology, methods of phylogenetic systematics and critical evaluation of phylogenetic hypotheses.

Prerequisite: At least one upper division course in organismal biology.

## BIOL 646 Aquatic Toxicology (3)

An introduction to assessing the effects of toxic substances on aquatic organisms and ecosystems. Topics include general principles of toxicology, fate and transport modes, quantitative structure-activity relationships, single-species and communitylevel toxicity measures, regulatory issues, and career opportunities. Examples are drawn from marine, freshwater, and brackish-water systems. Lectures three hours per week.

## BIOL 650 Seminar in Marine Biology (1)

A seminar covering topics in marine biology, fisheries and aquaculture, marine biomedical science or coastal ecology. Total semester hours in BIOL 650 is normally limited to three. Does not satisfy elective unit requirement. (fall and spring)

## BIOL 690 Independent Study (1-4)

An individual directed study of issues or topics in an area of marine science. The topic and project outline must be approved by the thesis committee and the program director. Repeatable up to six semester hours toward graduation.

## BIOL 700 Research and Thesis (1-4)

Individual thesis research in marine biology. No more than four semester hours of the thesis may be counted toward fulfilling the minimum degree requirements.

# Master of Science in Mathematics 

Robert Mignone<br>Chair

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## http://math.cofc.edu/grad-progs/

## Program Description

The Department of Mathematics at The Graduate School of the College of Charleston offers a graduate degree program leading to a Master of Science in Mathematics. The program prepares students for careers in industry, academia or government, or for doctoral studies. It also provides people in teaching and other professions with the means for career advancement or career change.
Courses are offered in the summer and late afternoon/evening to accommodate working professionals. Classes are small, providing personal attention for students who can work closely on projects with individual faculty members. The graduate mathematics faculty is actively involved in a wide variety of research areas, including algebra, analysis, combinatorics, dynamical systems, geometry, Lie theory, logic, mathematical biology, mathematical physics, number theory, numerical analysis, probability, representation theory, scientific computing, statistics and topology.
The Department of Mathematics also offers a graduate certificate in statistics and in operations research. For more information, contact the program director or visit the program's website.

## Assistantships

A number of graduate assistantships are available for full-time students in the Department of Mathematics. The awards will normally be made by April 30 for the following academic year; applications indicating an interest in an assistantship should be completed by April 15. However, applications for assistantships will be considered throughout the year if funds permit.
Note: For information on additional financial aid, please refer to the financial information section of the Graduate Catalog.

## Minimum Admission Requirements

A bachelor's degree in mathematics or its equivalent with a minimum GPA of 3.0 in the major is the usual requirement for admission. This undergraduate training should include abstract algebra, differential equations, linear algebra and advanced calculus. Students who have not had all of these courses will still be considered for the program but must make up any deficiencies.
Students requesting admission should submit the following:

- a brief statement of goals.
- one official copy of a transcript from each institution of higher learning attended, including documentation of graduation from an accredited four-year college or university
- one official copy of test scores of the Graduate Record Examination, if available
- two letters of recommendation from former professors or immediate superiors in recent employment


## Admission Procedures

While applications will be considered throughout the year, the Graduate Steering Committee encourages completed applications for the program by the following dates:

Fall: July 1
Spring: November 1
Summer: April 1

## Transfer Credit Policy

An applicant or student of the Master of Science in Mathematics can seek approval from the Program Director to transfer in 12 credit hours to count towards the degree. These courses require a grade of B or higher while courses with a grade of "Pass" or "Satisfactory" will not be accepted.
Graduate courses taken at The Citadel or the Medical University of South Carolina are not considered transfer credit provided the student completes the cross-registration procedures established by The Graduate School of the College of Charleston. However, a minimum of 18 credit hours must be completed through the College of Charleston's Master of Science in Mathematics program.

## Degree Requirements

The master of science in mathematics requires 30 hours of coursework or 24-27 hours of coursework and a thesis.

## B.S./M.S. Degree Requirements

The College of Charleston offers a Bachelor of Science/Master of Science in Mathematics program. For selected students, permitting up to 12 hours of graduate-level course work taken as an undergraduate during the senior year to count towards the Bachelor of Science in Mathematics degree and the Master of Science in Mathematics degree allows for the design of a plan for completing a Bachelor of Science in Mathematics degree and a Master of Science in Mathematics degree in five years. An undergraduate student in the five-year plan taking a graduate level course during the senior year for both undergraduate and graduate credit would in every respect be treated as a graduate student in the course. The reason for including this option is to allow outstanding and motivated mathematics majors to earn graduate credit during their senior year and earn a Master degree in mathematics in a shorter time. Students enrolled in this program typically complete their M.S. degree within one calendar year after receiving the B.S. The combined degree is designed to integrate undergraduate-and graduate-level research and to give the selected students an outstanding preparation for entering a Ph.D. program in mathematics or related fields.

## Master of Science in Mathematics Core Curriculum

MATH 502 Advanced Linear Algebra
MATH 503 Applied Algebra I
MATH 511 Real Analysis I
MATH 515 Complex Variables
MATH 530 Mathematical Statistics I
As part of the student's coursework, the student must take MATH 502, three additional courses from the core curriculum and at least one sequence chosen from the following: MATH 530-531 (Mathematical Statistics I and II), MATH 503-604 (Applied Algebra I and II), MATH 511-612 (Real Analysis I and II), MATH 511-515 or MATH 515-511 (Complex Variables and Real Analysis I). The remaining hours will normally be selected from courses numbered 500 and above.
The program will be subject to the policies of The Graduate School of the College of Charleston. In particular, no more than 12 semester hours of transfer credit may be credited toward a degree. Please see the "Academic Information" section of this catalog for more details. Approved graduate courses at The Citadel or Medical University of South Carolina are not considered transfer credit, provided the student uses the Graduate School's cross-registration procedures (forms available in the Graduate School Office). However, the master of science in mathematics requires that at least 18 credits be from courses taught at The Graduate School of the College of Charleston.
Note: The frequency with which courses are offered is determined primarily by student needs and a balanced program. Following each course description is a code indicating the Department of Mathematics' plans to offer the course: $F$-every fall: $S$-every spring; oF - odd year fall; eF - even year fall; oS - odd year spring; eS - even year spring; oSu - odd year summer; eSu - even year summer. Schedule is subject to change based on student interests, faculty availability, curriculum changes and other factors. Courses without a code are offered when there is sufficient interest from students and faculty.

## Mathematics Course Descriptions

## MATH 502 Advanced Linear Algebra (3)

This course provides the background in linear algebra needed for advanced work in algebra, analysis, and applications. Topics include vector spaces over a field, dual spaces, bilinear functions, linear transformations, determinants, eigenvalues, projections, diagonalization, Jordan canonical form and infinite dimensional spaces. Special topics such as applications to approximation theory, positive matrices, computation, multilinear algebra and spectral theory will be selected by the instructor.
Prerequisite: MATH 203 (Linear Algebra).

## MATH 511 Real Analysis I (3)

Topics include set theory and metric spaces, topological properties, local and uniform convergence criteria, properties of continuous functions and differentiation of vector valued functions.

Prerequisite: MATH 411 (Advanced Calculus II). F

## MATH 515 Complex Variables (3)

Topics to be covered include the complex number system, analytic and harmonic functions, power series, integration, residue theory, analytic continuation, conformal mapping and applications.

Prerequisites: MATH 311 (Advanced Calculus I), MATH 411 (Advanced Calculus II) recommended. S

## MATH 523 Partial Differential Equations I (3)

This course is designed to provide first-year graduate students with an understanding of and the ability to solve some of the partial differential equations arising in science and engineering.
Prerequisite: MATH 221 (Calculus III) and MATH 323
(Differential Equations). eF

## MATH 530 Mathematical Statistics I (3)

Topics include probability, probability functions, probability densities, mathematical expectation, sums of random variables and sampling distributions.
Prerequisite: MATH 221 (Calculus III). F
MATH 531 Mathematical Statistics II (3)
Topics include decision theory, estimation, hypothesis testing, regression, correlation and analysis of variance.

## Prerequisite: MATH 530. S

## MATH 503 Applied Algebra I (3)

This course introduces basic concepts of abstract algebra and its applications. Topics include sets, relations, functions; introduction to graphs, group theory, LaGrange's theorem, the homomorphism theorems, applications to coding theory and connections with graph theory; Boolean algebra, with applications to combinatorial circuits.

## Prerequisite: MATH 303 (Abstract Algebra). oSu, eS

## MATH 540 Statistical Learning I (3)

Introduction to various approaches to statistical learning including empirical processes, classification and clustering, nonparametric density estimation and regression, model selection and adaptive procedures, bootstrapping and crossvalidation.

Prerequisite: MATH 203, MATH 220, and MATH 350

## MATH 541 Statistical Learning II (3)

Neural networks, nearest neighbor procedures, Vapnik Chervonenkis dimension, support vector machines, structural risk minimization induction, regularization methods and boosting, and baggin in classification and regression.
Prerequisite: MATH 540.

## MATH 545 Numerical Analysis I (3)

This course is a study of numerical methods and analysis of the associated errors. Topics include both direct and iterative methods of numerical linear algebra, computation of eigenvalues and singular values, approximation of functions
and numerical solution of ordinary differential equations. Standard computer software libraries will be used.

Prerequisite: MATH 203 (Linear Algebra), MATH 323
(Differential Equations), and CSCI 220 (Computer
Programming I) or permission of the instructor. oS

## MATH 550 Linear Models (3)

This course provides an introduction to the theory of linear models for analyzing data. Topics include analysis of variance and regression models, as well as Bayesian estimation, hypothesis testing, multiple comparisons, and experimental design models. Additional topics such as balanced incomplete block designs, testing for lack of fit, testing for independence, and variance component estimation are also treated. The approach taken is based on projections, orthogonality, and other vector space concepts.
Prerequisites: Linear Algebra (MATH 203) and Statistical Methods (MATH 350) eF

## MATH 551 Linear Programming and Optimization (3)

This course is designed to provide first-year graduate students with an introduction to deterministic models in operations research. Topics include linear programming, network analysis, dynamic programming and game theory.
Prerequisite: MATH 221 (Calculus III), MATH 203 (Linear Algebra), and CSCI 220, or permission of the instructor. oF

## MATH 552 Operations Research (3)

This course is designed to provide first-year graduate students with an introduction to probabilistic models in operations research. Topics include nonlinear programming, queueing theory, Markov chains, simulation and integer programming.

Prerequisite: MATH 221 (Calculus III), MATH 530
(Mathematical Statistics I), CSCI 220, or permission of the instructor. eS

## MATH 555 Bayesian Statistical Methods

Posterior distributions using observed data are calculated and used for inferences about model parameters. Classical statistical methods are compared with the Bayesian methods and classical models such as linear regression, ANOVA, and generalized linear models are extended to include the Bayesian paradigm. Monte Carlo methods, Gibbs sampling and Metropolis-Hastings algorithms.

## Prerequisites: MATH 430 Mathematical Statistics I

MATH 580 Topics in Applied Mathematics (3)
This course is a one-semester introduction to an advanced topic in applied mathematics with generally only undergraduate mathematics prerequisites.
Note: Since the course content is variable, it may be repeated for credit.

## MATH 585 Topics in Pure Mathematics (3)

This course is a one-semester introduction to an advanced topic in pure mathematics with generally only undergraduate mathematics prerequisites.

Note: Since the course content is variable, it may be repeated for credit.

## MATH 589 Special Topics in Probability and Statistics (3)

This course is a one-semester introduction to an advanced topic in Probability and Statistics with generally only undergraduate mathematical prerequisites.

## Prerequisites: TBA

Note: Since the course content is variable, it may be repeated for credit.

## MATH 601 General Topology (3)

This course provides an introduction to general topology. Topics include the generation of topological spaces, continuity, connectedness, compactness, separation and countability.
Prerequisite: MATH 311 (Advanced Calculus I), MATH 411 (Advanced Calculus II) recommended.

## MATH 604 Applied Algebra II (3)

This course is a continuation of MATH 503. Topics include rings and fields with applications to block designs, BCH and difference codes, public key crytography; semigroups and monoids, with applications to automata and languages.
Prerequisite: MATH 503.

## MATH 607 Discrete Mathematics (3)

This course is an introduction to the theory and applications of discrete mathematics. Topics include enumeration techniques, combinatorial identities, matching theory, basic graph theory, combinatorial designs and related topics.
Prerequisite: MATH 203 (Linear Algebra).

## MATH 612 Real Analysis II (3)

This course is a continuation of MATH 511. Topics include the Riemann-Stieltjes integral, equicontinuous families of functions, Lp spaces, linear transformations, the inverse and implicit function theorems and elementary measure theory.
Prerequisite: MATH 511.

## MATH 623 Partial Differential Equations II (3)

Topics include first-order equations and the Cauchy problem, canonical forms of second order equations, the CauchyKowalevski Theorem, separation of variables and eigenfunction expansions, Green's functions, maximum principles and numerical methods. Special topics such as the calculus of variations, the Galerkin method, perturbations, bifurcations and group methods will be selected by the instructor.
Prerequisite: MATH 523 (Partial Differential Equations I). oS

## MATH 624 Dynamical Systems (3)

This course provides an introduction to the qualitative theory of ordinary differential and difference equations. Topics include existence uniqueness, stability theory, limit cycles, Poincaré maps, structural stability and bifurcation theory. Applications will be provided throughout the course. Special topics such as Hamiltonian systems, gradient systems,
perturbations, symbolic dynamics, strange attractors and chaos will be selected by the instructor.

Prerequisite: MATH 323 (Differential Equations) and MATH 502.

## MATH 645 Numerical Analysis II (3)

This course is a continuation of MATH 545. Topics include finite difference and finite element methods for partial differential equations and numerical optimization. Other topics will be selected by the instructor.
Prerequisite: MATH 545. oF

## MATH 650 Statistical Quality Control (3)

This course is an introduction to basic methods of statistical process control. Topics include control charts, cumulative sum control charts, lot acceptance sampling plans and related topics.
Prerequisite: MATH 350 (Statistical Methods) or permission of the instructor. eSu

## MATH 651 Design of Experiments (3)

This course is an introduction to how and why scientific experiments should be designed. The most commonly used designs and their variations along with resulting analysis will be covered.

Prerequisite: MATH 350, or equivalent, or permission of the instructor. oSu

## MATH 680 Special Topics in Applied Mathematics (3)

This course is a semester study of an advanced topic in applied mathematics.

Prerequisite: Permission of the instructor. Notes: Since the content changes, this course may be repeated for credit.
Note: Since the content changes, this course may be repeated for credit.

## MATH 685 Special Topics in Pure Mathematics (3)

This course is a semester study of an advanced topic in pure mathematics.
Prerequisite: Permission of the instructor. Notes: Since the content changes, this course may be repeated for credit.

## MATH 699 Independent Study in Mathematics (3)

This course is designed to provide graduate students with an opportunity to study an area of mathematics of interest to them that is not generally offered.
Prerequisite: Depends on the particular topic being studied.

## MATH 700 Thesis (3)

This course is an individual study in mathematics directed by a faculty member.
Prerequisites: Approval of the Graduate Steering Committee and the instructor.
Notes: This course may be taken for credit twice when the nature of the study warrants it. The following courses, regularly taught in the Department of Biometry and Epidemiology at the Medical University of South Carolina, may also be used as part of the curriculum for
students emphasizing statistics. Students enroll in these courses using the cross-registration procedures. At least 18 credit hours must be earned from graduate courses of the College of Charleston.

# Master of Arts in Teaching Middle Grades Education 

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## http://teachered.cofc.edu/grad-progs/edmg.php

## Master of Arts in Teaching (M.A.T.) Middle Grades Education (5-8)

The Graduate School of the College of Charleston and The Citadel Graduate College offer a joint Master of Arts in Teaching the Middle Grades. The M.A.T. in Middle Grades Education focuses on the education of fifth through eighth graders and is designed for those who want to teach middle grade students and have an undergraduate degree(s) in any of the following disciplines: English, mathematics, history/social science, biology, chemistry, geology, or physics. The program combines academic work and a variety of experiences in public middle schools.

Successful completion of the M.A.T. program requirements leads to recommendation for teaching certification/licensure in grades five through eight in South Carolina, in addition to a master's degree. The State of South Carolina has reciprocal licensure agreements with many state departments of education across the United States

## Degree Requirements

The M.A.T. in Middle Grades Education is awarded to candidates who successfully complete an approved Program of Study consisting of a minimum of 39-42 credit hours and earn an overall GPA of 3.0 or higher. This Program of Study may include additional coursework due to deficiencies in the content area determined by a review of the undergraduate transcript(s). Candidates have one calendar year following program acceptance to complete these additional requirements with a minimum GPA of 2.5 . This one-year requirement can be extended with permission from the program director. Certification requirements for M.A.T. students are described in the teacher education information packet for M.A.T. students and the Clinical Practice Handbook. As part of the certification procedure each M.A.T. student must take the national PRAXIS tests: Middle School Grades Content Area and Principles of Learning and Teaching. Advisors will provide important details about these requirements. All examinations are administered by the Educational Testing Service and application forms are available in the School of Education, Health and Human Performance, main office, at 86 Wentworth Street. One copy of each test score must be sent directly to the School of Education, Health and Human Performance at the College of Charleston and a second copy to the South Carolina State Department of Education.

## Admissions Requirement

Admission to the program will be granted based on a review of each applicant's admission materials by a Joint Program Committee. The application packet must be fully completed in order to be considered for admission into the program. Each application should include the following:

- A completed application form with a nonrefundable application fee of $\$ 50$.
- Official college transcript(s) of all undergraduate and graduate coursework from accredited institution(s). An earned bachelor's degree with a concentration in one of the four content areas (science, mathematics, English and social sciences)
- A statement of goals describing the applicant's suitability for and desire to pursue the M.A.T. program and a career in teaching
- A 2.5 (on a 4.0 scale) grade point average (GPA) from their degree-granting institution(s)
- Official Graduate Record Examination (GRE) scores, or, official Miller Analogies Test (MAT). Expectations for the GRE are a minimum composite score of 800 as well as a score of 4.0 or higher on the analytical writing sample for exams taken prior to August 1, 2011. For exams taken on or after that date, expectations are a minimum composite score of 290.
- Two letters of recommendation from persons familiar with academic and/or work experience. Letters should indicate evidence of potential for graduate studies and working with children. One letter should be from someone who has observed the candidate working with children.
- Professional résumé.
- Self-assessment of professional goals and dispositions
- Results of the Test of English as a Foreign Language (TOEFL) if applicant's primary language is not English.
- A signed statement of ability to perform essential teaching duties under the American's with Disabilities Act (ADA).


## Completion of a Program of Study

As soon as possible after acceptance into the program and before enrolling in courses, an appointment must be made with an advisor to complete a Program of Study form. The process for completing an acceptable Program of Study is not finished until all copies of the form, with required signatures, have been filed with the Graduate School. The Program of Study is not official until the candidate is admitted as a degree-seeking student. All degree-seeking students must have an approved Program of Study on file no later than one month prior to the completion of the first semester. Failure to meet the deadline for filing an acceptable Program of Study may result in a delay in graduation or loss of program credit.

All academic work that has been completed, as well as that which is proposed for satisfying degree requirements, must be included in the Program of Study at the time of submission. Students may make changes of up to two courses in the Program of Study that are necessitated by enrollment problems or other circumstances by completing a Request for Change Form. This form must be endorsed by the advisor, department chair, and the program director. More extensive
changes may be accomplished by filing a new and "revised" Program of Study.

After the Program of Study is completed, the student meets with the advisor over the course of the program for scheduling and program planning to ensure timely completion of program requirements.

## Master of Arts in Teaching Middle Grades Education Program of Study

Expected pre-requisites include a bachelor's degree in the specific content area. See content concentration for additional information.

Candidates in all four concentrations of the M.A.T. in the Middle Grades program will complete the following Core Education coursework. Students must complete at least 50\% of his or her coursework at both The Citadel and at the College of Charleston. Courses offered through The Citadel can be found in The Citadel Graduate College's course catalog.
Social and Philosophical Foundations of Education
EDFS 652 Social and Philosophical Foundations of Education (College of Charleston) or
EDUC 500 Foundations of American Education (The Citadel)

## Educational Research

EDUC 512 Data Collection and Analysis (The Citadel) or
EDFS 635 Educational Research (College of Charleston)
*Educational Psychology: Human Growth and Development Focused on the Young Adolescent*
EDFS 654 Human Growth and Development (College of Charleston) or
EDUC 536 Educational Psychology (The Citadel)

## Introduction to Exceptional Children and Youth

EDUC 514 The Exceptional Child in School (The Citadel) or
EDFS 710 Introduction to Exceptional Children (College of Charleston)

## Middle Grades Organization and Curriculum

EDEE 515 Middle Grades Organization and Curriculum (College of Charleston)
*Application of Methods and Materials of Teaching in a Middle Level Field (Grades 5-8)*

EDUC 501 Methods and Materials of Middle and High School Teaching (The Citadel) or

EDMG 658 Application of Methods and Materials in a Middle Level Field Grades 5-8 (College of Charleston)
Teaching, Reading and Writing in the Content Areas
EDUC 592 Teaching Reading and Writing in the Middle and High School Content Areas (The Citadel)
*These courses are part of the Middle Grades Practicum and must be taken concurrently at the same institution Total Core Education Credit Hours: 21

The common set of required core education courses, along with the specialty coursework and required number of credits meet the requirements of the State Department of Education for teacher certification. Because of differing requirements the minimum number of credits required for degree completion will vary according to the concentration. Each concentration (English, mathematics, science and social science) require 21 Core Education credit hours.

## Field Experiences and Clinical Practice/Internship Semester Expectations

## Middle Grades Practicum*

The following courses are required to be taken concurrently and at the same institution as part of the Middle Grades Practicum. The Practicum includes field experience hours.
EDFS $654 \begin{aligned} & \text { Human Growth and Development (College of } \\ & \text { Charleston) and }\end{aligned}$
EDMG 658 Application of Methods and Materials in a Middle Level Field Grades 5-8 (College of Charleston)
or
EDUC 536 Educational Psychology (The Citadel) and
EDUC 501 Methods and Materials of Middle and High School Teaching (The Citadel)
As is expected for all South Carolina graduate teacher preparation programs, candidates in this program will spend a minimum of 75 hours in public middle school settings prior to their clinical practice/internship semester. The field experience includes participating in activities that range from focused observation to assisting small groups to teaching whole classes. These pre-internship experiences are an integral part of the core education courses.

## Clinical Practice: Culminating Professional Experiences in Middle School

(Total 9 Credit Hours - Clinical Practice is to be taken at home institution)

| EDMG 699 | Middle Grades Clinical Internship (College of <br> Charleston) and |
| :--- | :--- |
| EDMG 698 | Transition to the Profession Seminar (College <br> of Charleston) |
| or |  |
| EDUC 520 | Professional Internship (The Citadel) and |
| EDUC 525 | Transition to the Profession Seminar (The <br> Citadel) |

During the clinical practice/ internship semester, teacher candidates in this program will spend 60 full days in a public middle school setting with content area certified teachers who are ADEPT trained as well as participate in a Transition to the Profession Seminar course during the final semester of the program.

Note: The School of Education, Health, and Human Performance policy states that field experience and clinical practice placements are made within the tri-county area. The School of Education, Health, and Human Performance reserves the right to place candidates in the closest approximate placement.

## Title II Report Card

The College of Charleston Title II report card can be located by going to the South Carolina Department of Education, Title II website, http://title2.ed.gov. Additionally, copies of the report can be attained by contacting the director of the Office of Student Services and Certification at 843.953.5613 or 86 Wentworth St., College of Charleston, Charleston, SC, 29401. To discuss the College of Charleston Title II Report Card, contact the Dean of the School of Education, Health and Human Performance at 843.953.5613.
For the purpose of Title II reporting a program completer is defined as a candidate who has successfully completed clinical practice.

## Non-Degree Status

Certified teachers only. Certified educators who are not seeking a degree, but who wish to take courses in education for the purposes of professional development and recertification, may be admitted as non-degree seeking students. Candidates should submit a completed application form with a nonrefundable application fee of $\$ 45$ and a copy of a professional teaching credential.
The non-degree graduate student subsequently may be reclassified as a regular degree-seeking student in a M.Ed. program. In order to accomplish reclassification as a regular degree student, the candidate must complete and meet the admission requirements for the program of interest. No more than 6 graduate credit hours taken in non-degree status may be applied toward degree requirements if the student is later admitted to a degree program. Non-degree status is not intended to be a temporary classification for those ineligible for admission to the degree program.

## Professional Development for Certified Teachers

Certified educators can enroll in professional development courses through the School of Education, Health, and Human Performance's Office of Professional Development in Education (OPDE). These courses, known as Professional Development courses (EDPD), are used to modernize instructional strategies and offer content enrichment opportunities while leading to recertification points and pay scale advancements. These professional development credits offered through OPDE do not count toward the completion of an advanced degree such as the Master of Education or Master of Arts in Teaching. For more information regarding professional development courses, contact the OPDE Office at 843.953.7651.

Please note that EDPD courses differ from catalog courses. A catalog course has been approved as part of a course of study in a College of Charleston graduate-level program. These courses are ones that are offered through a contract course arrangement and count towards a master's degree in a specific
discipline area (i.e.: M.A.T. and M.Ed. programs). They are awarded graduate credit, reviewed, and accepted by the specific discipline/curriculum involved.

## Master of Arts in Teaching Middle Grades Education Concentrations

- The minimum required specialization credit hours for English are 21, equaling 42 required credits for graduation.
- The minimum required specialization credit hours for mathematics are 18 , equaling 39 required credits for graduation.
- The minimum required specialization credit hours for science are 18 , equaling 39 required credits for graduation.
- The minimum required specialization credit hours for social science are 18 , equaling 39 required credits for graduation.


## English Concentration - 42 Hours

## Expected Undergraduate Content

Students entering the program without these courses will be expected to take them either on the undergraduate or graduate level and pass them with a $C$ or better as part of their program of study.

- Adolescent Literature
- World Literature (2 courses)
- American Literature (1 course)
- Media Studies
- Modern English Grammar
- Creative Writing (short story, poetry, etc.)

Content Area Required Graduate Courses: 12 credit hours
(Plus any deficiency from expected undergraduate content as listed)

| EDMG 657 | Teaching Writing in the Middle Grades <br> (College of Charleston) |
| :--- | :--- |
| ENGL 595 | Methods and Materials of Teaching Middle and <br> High School Language Arts (The Citadel) |
| EDEE 678 | Success in Literacy for Older Readers (College <br> of Charleston) |
| EDUC 508 | Reading: Diagnosis and Remediation (The <br> Citadel) |

## Mathematics Concentration - 39 Hours

## Expected Undergraduate Content

Students entering the program without these courses will be expected to take them either on the undergraduate or graduate level and pass them with a C or better as part of their program of study.

- Algebra and Trigonometry - 1 course
- Geometry - 1 course
- Probability and Statistics - 1 course
- Discrete Math - 1 course


## Content Area Required Graduate Courses: 9 credit hours minimum

(Plus any deficiency from expected undergraduate content as listed)

SMFT 510 Introduction to Problem Solving (College of Charleston)
SMFT 516 Applications Across the Mathematics Curriculum with Technology (College of Charleston)
MATH 514 Methods for Teaching Middle/Secondary Mathematics (The Citadel) (All undergraduate math content courses must be completed before taking MATH 514)

To correct deficiencies in undergraduate preparation, students may be advised to go beyond the required graduate courses above and take additional graduate coursework from the following list of courses to complete their content area requirements. The courses chosen will be based on their undergraduate transcripts. Each course is offered at the College of Charleston.

SMFT 514 Geometry for Elementary and Middle School Teachers (College of Charleston)
SMFT 511 Introduction to Probability and Statistics (College of Charleston)
SMFT 518 Applications of Calculus for Teachers (College of Charleston)

## Science Concentration-39 Hours

## Expected Undergraduate Coursework

A bachelor's degree in one of the following content areas:

- Biology
- Chemistry
- Physics
- Geology


## Content Area Required Graduate Courses: 9 credit hours minimum

Middle Grades science requires content in all areas of science to successfully pass PRAXIS II Middle Grades Science Test. Therefore students must choose appropriate courses from a spectrum of courses and may NOT complete the degree with only one content area. Below are the required courses for middle school science candidates:

EDFS $660 \quad$ Nature of Science, Mathematics, and Science/Mathematics Education (College of Charleston)

- One of the following science methods courses based on evaluation of undergraduate transcripts: BIOL 605 Laboratory Methods in Biology, BIOL 606 Field Method
in Biology, or BIOL 609 Seminar in Environmental Science. (Each course is offered at The Citadel)
- Based on an evaluation of undergraduate transcripts to ensure adequate breadth in preparation for the sciences, the faculty advisor will recommend the remaining required coursework from the following list. Each course is offered at the College of Charleston.

SMFT 523 Earth Science for Teachers
SMFT 537 Topics in Botany for Teachers
SMFT 548 Atomic Theory of Matter from Lucretius to Quarks
SMFT 555 Applications of Physics for Teachers: How Things Work
SMFT $639 \quad$ Genetics and Molecular Biology for Teachers
SMFT $645 \quad$ Physics of Force and Motion for Teachers
SMFT 647 Determination of Structure and Matter
SMFT 524 Space Science for Teachers

## Social Science Concentration - 39 Hours

## Expected undergraduate coursework

A bachelor's degree in history, sociology, or other social science. Students entering the program without these courses will be expected to take them either on the undergraduate or graduate level and pass them with a C or better as part of their program of study.

- 2 World History or Western Civilization courses
- 2 US History courses
- 1 South Carolina History course
- 1 choice of Anthropology or Sociology course
- 1 micro-Economics course
- 1 Political Science course that covers American Government


## Content Area Required Courses: 9 credit hours minimum

(Plus any deficiency from expected undergraduate content as listed.)

HIST 692 Teaching History and Social Sciences (The Citadel)

Two of the following based on evaluation of undergraduate transcripts to ensure that the candidate has expected preparation for South Carolina Middle School Social Studies teachers (The following HIST courses (except HIST 594) are from the joint Citadel/College of Charleston M.A. in History program):

GEOG 511 World Geography (The Citadel)
HIST 521 The American South
HIST 522 South Carolina History
HIST 594 Historiography for Social Studies Teacher (The Citadel)
HIST 693 Historical Geography

## Middle Grades Education Course Descriptions

## EDEE 515 Middle School Organization and Curriculum (3)

An overview of the middle school concept, including 1) historical and philosophical antecedents, 2) conflicting perceptions of middle school, 3) definitions of middle school and middle-level concept, 4) characteristics of the emerging adolescent and related program implications, 5) change factors involved in conversion to the middle school concept, 6) evaluation methods for determining effectiveness and student progress and 7) speculation on the future of the middle school movement.

## EDEE 678 Success in Literacy for Older Readers (3)

An in-depth examination of the relationship between reading methods, reading materials and the thinking process. Methods to work with the older students (upper elementary and middle grades) as they learn to read and construct knowledge are the focus.

## EDFS 635 Educational Research (3)

An in-depth study of methods used in different types of educational research. Includes involvement of the student in the process of educational research design, implementation, reporting, and evaluation.

## EDFS 652 Foundations of Education (3)

In-depth study integrating concepts and information from major social sciences and philosophy to examine the problem of teaching in modern schools. Historical approaches are used to focus on cultural, socioeconomic and political issues affecting education.

## EDFS 654 Human Growth and Development (3)

The study of general principles of lifelong human growth and development and the relationship of teaching and learning theories to physical, social, intellectual and emotional development.
EDFS 660 Nature of Science, Mathematics, and Science/Mathematics Education (3)

Topics include the historical development of science and mathematics and the variety of philosophies in science/mathematics education. Other topics include social trends affecting science and mathematics education in the United States since 1900, including reform movements of 1904, 1937, 1945, 1960 and the present: and local frameworks addressing national and global concerns.

## EDFS 710 Introduction to Exceptional Children and Youth (3)

An introductory course designed for general and special educators. An interdisciplinary approach to the study of the learning and behavioral characteristics of exceptional children and youth. Includes causes, identification, educational and community programs and provisions.

## EDMG 657 Teaching Writing in the Middle Grades (3)

This course will address the teaching of writing theories, research and pedagogies represented in best practice models of teaching and assessing writing in middle grades. Students will learn about teaching writing through engaging in their own writing/design processes using print and non-print texts to study writing processes. This course will be framed from a $21^{\text {st }}$ Century literacies perspective and will highlight the connections between the teaching and learning of writing, reading, speaking, viewing and listening. This course will also include content on teaching writing to children from diverse backgrounds including English Language Learners.

## EDMG 658 Application of Methods and Materials in a Middle Level Field Grades 5-8 (3)

This course provides candidates an opportunity to observe, teach content lessons, and examine the middle level teachers' role in establishing and maintaining a positive classroomlearning environment. Candidate lessons will be evaluated using the SC teacher evaluation instrument. Reflection is the method used for identification of ways to improve instructional practices.

## EDMG 698 Transition to the Profession Seminar (3)

This course is for candidates seeking SC teacher certification in the middle grades. The purpose is to provide each candidate an opportunity to demonstrate his/her ability through successful completion of all ADEPT written materials, reflections and a professional portfolio. This course experience reflects the Teaching and Learning Standards of the teacher education program at the College of Charleston. Co-requisite: EDMG 699

## EDMG 699 Middle Grades Clinical Internship (6)

This course is for students seeking SC teacher certification. The purpose is to provide an opportunity to accept full responsibility for the total classroom instructional process. A teacher and a college supervisor complete supervision. The clinical practice experience reflects the Teaching and Learning Standards of the teacher education program at the College of Charleston. Co-requisite: EDMG 698

## HIST 521 The American South (3)

The political, economic, social and intellectual development of the South from the 1920s to the present, with emphasis on the region within the national context as one of both change and continually.

## HIST 522 South Carolina History (3)

A survey of the political, economic, social and intellectual development of South Carolina from it discovery to the present, with emphasis on the relation of the state to the south and the nation.

## HIST 693 Historical Geography (3)

A study of differing economic and social patterns, with emphasis on such fundamental determinants of economic activities as climate, raw materials, locations and the interrelationships of these to each other and to world affairs generally. Construction and use of simplified models and
diagrams to illustrate the foregoing are a basic part of the course.

## SMFT 510 Introduction to Problem Solving (3)

A course designed primarily for elementary and middle-level teachers to investigate mathematics topics through problemsolving activities. Topics covered will include numeric and algebraic concepts and operations: patterns, relationships and functions: geometry and spatial sense and measurement. The NCTM Standards, NCTM Addenda Series and the South Carolina Mathematics Curriculum Framework will serve as a basis for the nature and content of activities.

SMFT 511 Introduction to Probability and Statistics (3)
This course is designed primarily for elementary and middlelevel teachers. The course will examine methods of statistical measurement and their uses and misuses in interpreting and describing data. The course also addresses variation, the underlying framework and application of basic probability distributions and inductive reasoning through probability.

SMFT 514 Geometry for Elementary and Middle School Teachers (3)
This course will investigate plane and geometric shapes, transformations, lines and coordinate geometry and measurement. Students will investigate geometric formulas, theorems and simple proofs through a hands-on approach that includes developing geometric constructions, making models and using technology.

## SMFT 516 Applications Across the Mathematics Curriculum with Technology (3)

This course, intended for middle and secondary school teachers, explores applications of mathematics which use geometry, trigonometry, probability and statistics, networks, matrices and linear programming. We will develop practical classroom presentations of various applications, and integrate computer and graphing calculator activities into these classroom modules.

## SMFT 518 Applications of Calculus for Teachers (3)

A course designed primarily for science and math teachers to investigate applications of calculus in science and technology. Topics will include a review of limits, derivatives and integration techniques, as well as applications to physics, geology, chemistry, biology and technology. Investigative labs, utilizing data collection, and interdisciplinary projects will be major components of the course.

## SMFT 523 Earth Science for Teachers (4)

This course examines the physical nature of earth, its oceans, and atmosphere. Teachers will examine the geological processes affecting the surface of the earth and the interaction of earth's dynamic hydrosphere and atmosphere. Throughout the course, teachers will acquire conceptual knowledge of these processes with the expectation of learning and developing classroom activities appropriate for primary and middle school students. Where appropriate, teachers will use computer-downloaded and real-time satellite images and space shuttle photographs to develop activities.

## SMFT 524 Space Science for Teachers (4)

This course focuses on topics in space science while using pedagogical techniques appropriate for middle and upper school instruction. Astronomy and planetary geology are major components of this course.

## SMFT 537 Topics in Botany for Teachers (4)

The course will focus on plant structure and physiology, with an emphasis on the flowering plants. The course will also cover the evolution of diversity in the plant kingdom, processes of growth, reproduction and development, and the basic principles of plant ecology. The course will integrate lecture, lab, field trips, and workshops to expand your knowledge of botany, and to help you translate information about botany into functional classroom activities.

## SMFT 548 Atomic Theory of Matter From Lucretius to Quarks (4)

Why we believe in the existence of particles- This section will explore observable data through laboratories that introduce the physical, observable behavior of matter and will introduce students to scientific models and model building based on those observations. The nature and behavior of those particles - This section will follow the development of the atomic theory to the working models of today. Explanations of "real" world phenomena as a function of those particles -This section will build connections between the fundamental atomic theory and applications to biology, earth and space science, material science, and applications in chemistry and physics.

## SMFT 555 Applications of Physics for Teachers: How Things Work (4)

We connect the physics to a wide variety of fields: biology, anatomy, geology, astronomy, and so on. We will also connect everything to the real world. Abstraction is good, but we want to make this material real for your students. This means that we need to be able to put every principle of physics in obvious terms to your classroom students. We hope to empower you to function at a level such that you can meet the needs of every student, those exceptional ones on either side of the spectrum as well as those in the middle. This empowerment will enable you to analyze things outside of your normal curriculum, and to answer those embarrassingly frequent subtle and insightful questions that children ask.

## SMFT 639 Genetics and Molecular Biology for Teachers (3)

The course will introduce teachers to content and methodology necessary to effectively teach genetics and molecular biology at the high school level. Many of the topics may be suitable (or can be modified) for the middle school classroom. This course is going to be grounded mainly in inquiry-based and/or active exploration. As such the course will involve some lecture, inquiry-based labs, engaging demonstrations, active learning approaches to teaching genetics and molecular biology, incorporation of technology into the classroom, and sharing of ideas.

SMFT 645 Physics of Force and Motion for Teachers (3)
This course is intended for practicing teachers, especially those at the K-8 level, who want to enhance their
understanding of the mechanical universe, forces and motion. We will use the language and tools of science (mathematics, computers, equipment, and words).

## SMFT 647 Determination of Structure and Matter (4)

This course investigates the discovery and development of spectroscopy as a major tool for studying the nature of matter. Its application to the study of modern atomic theory and modern astronomy will be explored. Laboratory work will include exercises in the use of this technique in modern analytical investigations.

# Master of Arts in Teaching in the Performing Arts 

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## http://www.cofc.edu/music/mat.html

## About the M.A.T. in the Performing Arts Degree Program

The Master of Arts in Teaching (M.A.T.) in the Performing Arts degree concentrations lead to P-12 teacher licensure by the South Carolina State Department of Education. The degree is designed for individuals who possess undergraduate degrees (or equivalent experience and/or training) in music, theatre or dance who desire to teach in public schools. This degree currently consists of a concentration in choral music (leading to South Carolina certification/licensure in general and choral Pk-12 music education). Concentrations in theatre (leading to certification/licensure in $\mathrm{P}-12$ theatre) and dance (leading to certification/licensure in P-12 dance) will be offered in the future.
The program uniquely combines the best of the College of Charleston's mission for serving the Southeast by connecting candidates with service in the public schools as well as providing for the continued growth and enrichment of artistic endeavors of the practicing artist. Although the program's primary purpose is teacher preparation, individuals are also provided the opportunity for continued study in their arts specialty which may be applied toward future pursuit of the terminal degree in their chosen arts concentration. Graduate coursework is completed in the School of the Arts and the School of Health, Education and Human Performance. Most coursework in the degree is taught by full-time faculty holding terminal degrees in their fields. Students are afforded plentiful opportunities to study and work within the renowned Charleston arts community.

## Professional Development for Certified Teachers

Certified educators can enroll in professional development courses through the School of Education, Health and Human

Performance Office of Professional Development in Education (OPDE). These courses, known as Professional Development Courses (EDPD) are used to modernize instructional strategies and offer content enrichment opportunities while leading to recertification points and pay scale advancements. These Professional Development credits offered through OPDE do not count toward the completion of an advanced degree such as the Master of Education or Master of Arts in Teaching. For more information regarding professional development courses, contact the OPDE Office at 843.953.7651.
Please note that EDPD courses differ from Catalog Courses. A Catalog Course has been approved as part of a course of study in a College of Charleston graduate-level program. These courses are ones that are offered through a contract course arrangement and count towards a master's degree in a specific discipline area (i.e.: M.A.T. and M.Ed. programs). They are awarded graduate credit, reviewed, and accepted by the specific discipline/curriculum involved.

## Master of Arts in Teaching in the Performing Arts

## Choral Music Concentration Admissions Requirements

The choral music concentration leads to South Carolina teacher licensure/certification in P-12 general and choral music.

## Degree-Seeking Students:

Admission to the M.A.T. in the Performing Arts Choral Music Concentration will be granted based on a review of each applicant's admission materials by a Faculty Admissions Committee consisting of the program director and two professors from the School of the Arts and/or School of Education. Each application should include the following:

- a fully completed application form with a nonrefundable application fee of $\$ 45$
- an official college transcript from an accredited institution documenting the completion of a baccalaureate degree with a concentration in the arts and the successful completion of Human Growth and Development and Arranging courses
- an applicant essay describing the applicant's suitability for and desire to pursue the M.A.T. program and a career in education
- an audition/interview demonstrating the applicant's performing and/or teaching ability in his/her chosen discipline
- a 2.5 overall undergraduate GPA, and a 3.0 undergraduate GPA in the last 60 hours of coursework (demonstrating academic proficiency)
- a statement of disclosure concerning all prior convictions including felonies and misdemeanors
- an official copy of test scores of the Graduate Record Examination which include the verbal, analytical and writing assessments
- An audition that includes the requirement for demonstrating the music proficiencies expected of undergraduate music education graduates in their major instrument, voice and functional keyboard.
- In addition to the special audition requirements, entrance exams will be administered in two areas: music theory and music history. Results of these additional audition requirements and entrance exams will be reviewed by an entrance exam committee consisting of the program director(s) and the chair of the music department. Two of the three committee members are music unit faculty. If a candidate does not meet these proficiencies, conditional admission is possible. The student may be required to take undergraduate coursework to gain the needed competencies. This coursework will not count toward degree completion.


## Theatre Concentration Admissions Requirements will be published after final approval.

## Non-Degree Students:

Teachers and arts professionals who are not seeking a degree but who wish to take graduate specialty coursework may be admitted as non-degree students. To apply under non-degree status, submit to the Graduate School Office:

- Copy of professional credentials
- An official college transcript from an accredited institution documenting the completion of a baccalaureate degree with a concentration in the arts


## Application deadlines:

Fall: July 1
Spring: November 1
Summer: April 1

## Required Courses for all concentrations

Candidates will complete a set of required core courses which are common for all concentration areas in the M.A.T. in the Performing Arts. Specialty coursework and required number of credits relate directly to the arts concentration.

PUBA 664 Arts in Education (3)
EDFS 725 Classroom and Behavior Management (3)
EDFS 710 Introduction to Exceptional Children (3)
EDFS 635 Educational Research (3)
EDFS 687 Technology Education for Teachers or
PUBA 663 Arts and Technology (3)
EDFS 794 Capstone: Clinical Practice in Music Education (9)

Specialty Coursework: Choral Music Concentration
In the currently offered concentration area of Choral Music, the requirements for graduate study are specified by the NASM accrediting body and the requirements of the State Department of Education for teacher certification. Assigned field experiences total a minimum of 75 clock hours and are required during the music methods courses as indicated by an
*. The breakdown of courses by total credit hours is:
Minimum Required Specialization Credits: 23
MUSE 610* Foundations and Preschool and Elementary

Music Methods (3)
MUSE 611* Middle Grades and Secondary Music Methods (3)

MUSE 701 Graduate Conducting, Style and Analysis I (3)
MUSE 601 Graduate Applied Music (2)
MUSE 702 Graduate Conducting, Style and Analysis II (3)
MUSE 602 Vocal Pedagogy (2)
MUSE 703 Music Literature Seminar (2)
MUSE 704 Trends and Issues in Music Education (3)
Ensemble (1/1)

* field experiences required

The minimum number of credit hours required for graduation is 47 .

## Specialty Coursework: Theatre Concentration (will

 be published after final approval)
## Course Descriptions

## EDFS 635 Educational Research (3)

An in-depth study of methods used in different types of educational research. Includes involvement of the student in the process of educational research design, implementation, reporting, and evaluation. (fall, spring and summer)

## EDFS 686 Special Topics in Education (1-6)

An intensive study of an approved special topic in the field of education. No more than three hours may be taken under this listing during an academic semester or its equivalent.

## Prerequisite: Permission of the instructor

## EDFS 687 Introduction to Educational Technology (3)

This is an introductory course for pre-service and in-service teachers using technology in the classroom. Students become familiar with application software such as word processing, databases and hypermedia, desktop publishing and telecommunications, and learn to evaluate hardware and software. (fall, spring and summer)

## EDFS 710 Introduction to Exceptional Children and Youth (3)

An introductory course designed for general and special educators. An interdisciplinary approach to the study of the learning and behavioral characteristics of exceptional children and youth. Includes causes, identification, educational and community programs and provisions. Observation required (10 hours). (fall)

## EDFS 725 Classroom and Behavior Management (3)

A study of a variety of management systems with focus on specific techniques and their application in the classroom. (spring, summer)

## MUSE 610 Foundations and Elementary Music Education Methods (3)

A study of the philosophies, principles, and methods needed for teaching music to elementary school children. The course focus is on organization, management and teaching methodologies of elementary music programs, with emphasis
on methods such as Orff and Kodaly. Course requirements include 40 hours of elementary classroom field experience.
Prerequisites: Two semesters undergraduate conducting or equivalent experience.

## MUSE 611 Middle and Secondary Choral Methods (3)

Organization and management of choirs, repertoire, programming considerations, and teaching methodology appropriate to Middle School/Junior High/High School choirs and vocal ensembles. Course requirements include 40 hours of field experience in a secondary classroom setting.
Prerequisites: Two semesters undergraduate conducting or equivalent experience.

## MUSE 701 Graduate Conducting I: Renaissance Through Classical Eras (2)

An in-depth study of advanced choral techniques, rehearsal methods and strategies, and stylistic and historical analysis methods appropriate for choral literature of the Renaissance, Baroque and Classical eras. This includes manual gestures, historical background, style, performance practice considerations, score analysis, rehearsal strategies, and literature.

Prerequisites: two semesters undergraduate conducting or equivalent experience.

## MUSE 702 Graduate Conducting Style and Analysis II: Romantic Period to the Present (3)

An in-depth study of advanced choral techniques, rehearsal methods and strategies, and stylistic and historical analysis methods appropriate for choral literature of the Romantic Period through the present. This includes manual gestures, historical background, style, performance practice considerations, score analysis, rehearsal strategies, and literature.

Prerequisites: Two semesters undergraduate conducting or equivalent experience.

## MUSE 704 Trends and Critical Issues in Music Education (3)

A review of current critical issues and trends in music education as these relate to local, state, and national education agencies and the education of children and youth in PK-12 public schools. This graduate course will enable students to engage in discussing, debating and studying educational issues impacting their lives as music educators. (summer)

## PUBA 663 Arts and Technology (3)

Artists have always experimented with emerging technologies, but in recent decades the field of Arts \& Technology has emerged as a dynamic and historically significant artistic practice. Discover the opportunities new technologies offer to arts managers; initiatives at the convergence of art and technology and the impact of technology and the arts on culture. Examine and conceptualize the themes of new media, sound art, moving images, the media artist, cyber culture and intellectual property issues.

## PUBA 664 Arts Education (3)

This course will examine current trends in arts education. Dealing primarily from an administrative viewpoint, the course will focus on government funding (local, state, and national), arts education organizations, specific pilot programs, and individual teaching situations. Although developed initially for the administrator, the course should prove equally valuable to the educator. (fall)

## MUSE 601 Applied Voice (1)

Development of advanced singing technique, tone quality, musicianship and performance skills. Individual lessons and master seminar in voice for graduate students. Private lessons are one hour per week.
Prerequisite: admission to the MAT in Performing Arts Program and permission of the instructor.

## MUSE 602 Vocal Pedagogy (2)

Study of vocal function, including exploration of anatomy and physiology, and the techniques/ methods for training the singing voice in both the developing child and the adult. Training and practice as a voice teacher - listening/analyzing/ diagnosing singing voice technique, and selecting/coaching singing repertoire for various levels of singing.

## MUSE 703 Choral Music Literature Seminar (2)

An in-depth, advanced examination of significant choral literature in all major genres in Renaissance, Baroque, Classical, Romantic, and Modern eras. Characteristics of repertoire at all levels of choral instruction are explored. Knowledge of lifespan development and choral literature characteristics are applied to repertoire development for use in PK-12 settings.

## EDFS 794 Clinical Practice in Music, Theater, Or Dance Education (9)

This course is designed to provide candidates with extensive supervised experience in teaching students in one of three arts disciplines: music, theater or dance, in a Pre-K-12 public school setting. Weekly on campus seminars are required.
Prerequisite: Completion of pedagogy including procedures courses related to each discipline and admission to clinical practice by the Office of Certification and Clinical Practice

# Master of Public Administration 

JoAnn Ewalt<br>Program Director

Janet L. Key<br>Community Assistance Program Director \& Internship Coordinator

Vacant<br>Program Coordinator<br>843.953.6690

## http://puba.cofc.edu/

## Program Mission

Our mission is to prepare public service leaders. Upon graduation our students will have the ability to think critically and creatively about public issues, the dedication and capacity to serve a diverse community and the skills to enter a professional position in a public organization. To accomplish our mission, our program provides the following:

- A rigorous core curriculum that examines the theoretical underpinnings of public service and provides concentrated areas of study in arts management, environmental policy, nonprofit management, and urban and regional planning;
- An environment that nurtures a commitment to service;
- Opportunities to support collaboration and the creation of partnerships among communities and public service organizations.
The M.P.A. program also offers professional certificates in Arts Management and Urban and Regional Planning. In addition, we offer a dual master's degree with the Master of Science in Environmental Studies Program. You can find more information on these programs elsewhere in this catalogue.


## Program Description

We are fully accredited by the Network of the Schools of Public Policy, Affairs and Administration (NASPAA). Program governance and admissions decisions are made by all core faculty in the M.P.A. program.
The M.P.A. program at The Graduate School of the College of Charleston is designed to provide the following:

- A carefully structured core curriculum that focuses on the major components of modern public management.
- An elective curriculum that allows the student to develop a program of study suited to his/her career goals.
- Opportunities to apply administrative knowledge and skills and gain practical experience in a public or nonprofit agency.
- Opportunities for graduate assistants to learn through participation in various research and community service projects.

The program's curriculum is 39 credit hours. It is designed to explore the essential elements of public management and public policy and to prepare students for increasingly complex public responsibilities in local and state government, nonprofit organizations, public/private partnerships and regional and federal agencies.
In addition, as more students seek opportunities for study abroad, and for study and internship opportunities with international NGOs and other global agencies, the program is working to facilitate these options.

## Core Curriculum

The core curriculum emphasizes both the skills and knowledge required to effectively manage and develop organizational resources and to understand the larger constitutional and political setting in which policy is developed and administrative tasks are defined and assessed.
The core curriculum consists of 21 semester hours of coursework and a three-hour internship:

PUBA 600 Public Service Roles and Responsibilities
PUBA 601 Research and Quantitative Methods for Public Administration

PUBA 602 Public Policy
PUBA 603 Managing Public Organizations
PUBA 604 Managing Human Resources
PUBA 605 Managing Financial Resources
PUBA 701 Capstone Seminar
PUBA 777 Internship (The internship can be waived for students with extensive employment experience in public administration.)

## Specialized Study

Elective courses are available in four areas of specialized study:

- Nonprofit Administration
- Arts Management
- Municipal Government and Urban Planning
- Environmental Policy and Administration

Opportunities to develop higher levels of skill and specialized study include a thesis project (PUBA 710), directed independent studies (PUBA 711) and special topics seminars (PUBA 502). Any specialization consisting of fewer than 18 credit hours will not show up on students' transcripts.

## Transfer Credit Policy

With the permission of the director, courses are often available through other graduate programs on campus and through the Medical University of South Carolina's Health Administration Program. Credit earned at the Medical University of South Carolina is not considered transfer credit provided the student registers for the coursework using the cross-registration process. All transfer credits (no more than twelve [12] hours) completed at other institutions must be approved by the director.

## Applied Focus

Students are introduced to practical administrative and analytic skills in a variety of ways. The program regularly uses adjunct faculty to teach elective courses. These practitioners instruct students in their particular specialty, providing them with a valuable, hands-on perspective useful in supplementing their broader training. In addition, the program fosters contacts with professional mentors. A variety of workshops, training sessions, and speakers are sponsored by the program and by the Master of Public Administration Student Association (MPASA). Finally, students gain practical experience in the internship component of the program by working with practitioners on a daily basis.

## Internships

The internship should augment the student's area of study. To satisfy the requirement, students will be required to work no fewer than 300 hours over the course of the semester for three hours of internship credit. A contract is required between the supervisor, student and program director. The student will be expected to satisfactorily meet the expectations of the agency. To that end, the M.P.A. director and the internship coordinator will periodically evaluate the student's performance, and consult the on-site internship supervisor. Finally, the student must submit a paper on the duties, responsibilities and experience provided by the internship. Internship supervisors will provide valuable feedback to the program regarding the student's performance and capabilities and this feedback will become part of the program's evaluation of the student's work. Those who are in-service or who have significant experience in public administration may formally request to have the internship requirement waived by providing a resume and a letter describing their work experience to the program director. Students granted a waiver will take an additional elective course ( 3 hours) in order to satisfy the hourly requirements for the degree.

## Assistantships

Graduate assistantships are available on a competitive basis for full-time students. Individuals receiving assistantships must enroll in nine hours of coursework per semester. Research assistants work 20 hours a week on research projects or may be assigned to individual faculty for research assistance. A variety of assistantships are also available with the Arts Management Program, the Riley Center for Livable Communities and other offices on campus.

## Thesis

It is recommended that all students take PUBA 701 Capstone to complete the M.P.A. program. If a student has intentions of pursuing a Ph.D. in the field, this course may be waived by the program director in lieu of writing a thesis. In order to complete the thesis requirement students must have a core M.P.A. faculty member as their advisor along with a committee of two other faculty. In order to register for thesis hours, the student must develop an independent study contract with their advisor containing an agreed upon research proposal and timeline. The final thesis must adhere to all the guidelines set forth in the Graduate School's Thesis Manual.

## Application Procedures and Admission Requirements

Students from diverse undergraduate backgrounds are strongly encouraged to apply. In certain cases, students with no prior training in American administrative institutions or the social and behavioral sciences may be required to enroll in undergraduate courses to properly prepare themselves for graduate study in the M.P.A. program.

## Procedures

Students may apply to the M.P.A. program at any time during the year. Applications must be completed by the following dates:

Fall: June 1
Spring: November 1
Summer: March 1
Applications should be submitted online. You may access the online application system at:
http://gradschool.cofc.edu/applyingtograduateschool/index.ph p
Letters of recommendation may also be submitted online.
Information about this will be found at the web address above. We require that all references submit a letter on your behalf in addition to completing the applicant questionnaire.
Any supporting materials that must be mailed may be sent to: College of Charleston
The Graduate School
66 George Street
Randolph Hall, Suite 310
Charleston, S.C. 29424-0001

## Application Requirements for Degree-Seeking Students:

- Submit a completed application form along with a nonrefundable application fee of $\$ 50$ online at http://gradschool.cofc.edu.
- Submit a letter of intent stating your reasons for applying to the program, areas of interest, and career objectives.
- Submit an official transcript from your undergraduate college or university. If you have attended more than one undergraduate institution, you are required to submit official transcripts from all schools. If you have earned a Master's degree, you are required to submit official transcripts from the graduate college or university.
- Submit three letters of recommendation from persons familiar with your academic record - at least two references should be collegiate-level instructors. References should address your academic ability and motivation to successfully complete a graduate degree.
- Submit official copy of test scores from the Graduate Record Examination (GRE). You are not required to take an advanced (subject area) test on the GRE. The GRE requirement is waived for applicants with a Master's degree.
- Submit optional materials, such as undergraduate theses or term papers, samples of work projects, etc.


## Minimum Admission Requirements for DegreeSeeking Students

- Minimum grade point average of 3.0 (on a 4.0 scale)
- Scores from GRE tests taken through July 31, 2011 must have a composite score of 1000 on the combined verbal and quantitative sections and 4 on the writing assessment section. The minimum requirements for tests taken on or after August 1, 2011 require a minimum composite score of 300 . While no specific minimum score on the writing assessment section is required, performance on the writing section will be used as a factor in admissions.
- Training in basic statistics. Otherwise, you may be required to take a basic statistics course prior to enrolling in Research and Quantitative Analysis for Public Administration.
Note: The admissions committee will carefully consider both GPA and GRE scores, as well as letters of recommendation and significant life experiences, particularly in public administration.
Note: International students must also fulfill the requirements listed elsewhere in the Graduate Catalog.


## Requirements for Non-Degree Students

Occasionally, students may desire to take courses in the M.P.A. program but not pursue the degree. These students are welcome to enroll in M.P.A. courses on a space-available basis as professional development students. Those seeking to enroll as professional development students must:

- Submit a completed application form along with a nonrefundable application fee of $\$ 45$ online at http://gradschool.cofc.edu/applyingtograduateschool/inde x.php.
- Provide verification of successful completion of an undergraduate degree with at least a 2.5 GPA.
- Receive the written permission of the director.

Note: Students wishing to take courses while fulfilling admission criteria (for example, waiting to take the GRE) are restricted to six hours of enrollment prior to admission.

## Plan of Study

After being admitted, new students should meet with the M.P.A. director to outline a tentative plan of study. Initially, the M.P.A. director acts as the student's advisor. After they become familiar with the M.P.A. faculty, students may wish to choose an advisor with a specialization in their area of professional interest. In the initial meeting with the M.P.A. director, a plan of study is developed based on the student's background, interest, training, experience and career objectives. These factors play a significant role in the elective courses chosen and eventual internship placement. Students should begin exploring internship opportunities early in their program of study and contact the internship coordinator. The initial plan of study will be reviewed as necessary on a semester-by-semester basis during the student's enrollment in the M.P.A. program. Before registering each semester, students should carefully select appropriate courses in order to fulfill degree requirements. The M.P.A. program provides the flexibility for students to develop a focus in a variety of areas through careful selection of elective courses and internship arrangements.

## Master of Public Administration Degree Requirements

The M.P.A. is a professional degree requiring 39 semester hours, including the following:

- 21 hours of core courses.
- 15 hours of electives ( 18 if the internship requirement is waived for previous experience).
- A three-hour credit internship. Internships are graded on a satisfactory/unsatisfactory basis.
- A minimum grade point average of 3.0.


## Certificate Policy

The College of Charleston's Master of Public Administration Program offers graduate certificates in Arts Management and Urban and Regional Planning. Up to 12 hours taken in the certificate programs may be transferred into the M.P.A. program with the approval of the program director. Students in the certificate program must still apply and be accepted into the M.P.A. program before credit hours can be transferred.
Program alumni interested in obtaining a certificate in Arts Management or Urban and Regional Planning may use up to 12 hours taken in the M.P.A. program towards their certificate with the approval of the M.P.A. and certificate program directors. Students must go through the admissions process and be accepted for the certificate program in order to be eligible to earn a certificate.

Students interested in earning both an M.P.A. degree and a certificate are eligible to do so, but must complete a separate application for each program. Students earning the M.P.A. degree and a certificate are expected to complete an internship relevant to the certificate's area of study.
Applications for each certificate program are reviewed by both the certificate's program director and the M.P.A. program director.

## Master of Public Administration Course Descriptions

## Core Courses

PUBA 600 Public Service Roles and Responsibilities
PUBA 601 Research and Quantitative Methods for Public Administration
PUBA 602 Public Policy
PUBA 603 Managing Public Organizations
PUBA 604 Managing Human Resources
PUBA 605 Managing Financial Resources
PUBA 701 Capstone Seminar
PUBA 777 Internship

## Nonprofit Administration

PUBA 650
PUBA 654

PUBA 655
PUBA 656

Essential Elements of Nonprofit Administration
Human Resource Management for Nonprofit Organizations
Nonprofit Capacity Building
Fundraising and Marketing for Nonprofits

PUBA 705 Managing Public/Private Partnerships
PUBA 502 Special Topics: Legal Aspects of Nonprofits
PUBA 502 Special Topics: Finance and Accounting for Non-Profits

## Arts Management

PUBA 660 Contemporary Perspectives on Arts Management
PUBA 661 Advanced Arts Management
PUBA 662 Cultural Administration and Applied Research at the Avery
PUBA 663 Arts and Technology
PUBA 664 Arts Education

## Environmental Policy and Administration

PUBA 613 Planning Law
PUBA 632 Environmental Policy
PUBA 634 Environmental Law and Regulatory Policy
PUBA 637 Wetlands Protection

## Municipal Government and Urban Planning

PUBA 611 Urban Policy
PUBA 612 History and Theory of American Urban Planning
PUBA 613 Planning Law
PUBA 615 Theories of Urban and Regional Development
PUBA 616 Local and Regional Economic Development: Policy and Practice
PUBA 620 Local Government Politics and Administration
PUBA 622 Intergovernmental Relations
PUBA 631 Administrative Law
PUBA 635 Land Use Law
PUBA 502 Special Topics in Public Affairs Seminars

## Electives

PUBA 512 Females/Minorities in Public Administration
PUBA 623 South Carolina Government and Policy
PUBA 631 Administrative Law
PUBA 640 Leadership and Decision Making
PUBA 706 Economic Theory for Policy Analysis
PUBA 720 The Practice of Public Administration
PUBA 722 Information Systems and Public Administration
PUBA 502 Special Topics in Public Affairs Seminars

## Public Administration Course Description

## PUBA 502 Special Topics in Public Affairs Seminars (1-3)

Covers current issues such as problem solving and public decisions; benefit-cost analysis; citizenship participation in public decision; and application of statistical techniques to public decisions. This course ranges from one to three credits. Students may take multiple PUBA 502 courses as long as the subject of the courses differ.

PUBA 512 Females and Minorities in Public Administration (3)

This course explores the historical and legal foundations for equal opportunity in employment and education. The social and political aspects of class/gender stratification are discussed. The concepts of equal opportunity, affirmative action, cultural diversity and harassment are addressed.
PUBA 600 Public Service Roles and Responsibilities (3)
This course explores the evolution and current status of the public sector in the United States. Students will study the ethical, legal, political, and professional dimensions of public service.

## PUBA 601 Research and Quantitative Methods for Public Administration (3)

This course examines the various aspects of collecting and processing primary and secondary data utilized by public organizations for decision-making and program evaluation. Students will learn basic qualitative and quantitative methods for developing a valid research design, how to create and implement surveys, and basic statistical analysis techniques.

## PUBA 602 Public Policy (3)

This course examines the activities of individuals, groups, and institutions that define or ignore public problems, participate or fail to participate in political struggles over these problems and confront or avoid opportunities to develop and implement solutions. The implications of these complexities for public employees and public management are emphasized.

## PUBA 603 Managing Public Organizations (3)

This course provides students with an understanding of the challenges of managing public organizations. Topics of study include leadership, motivation, group behavior, culture, decision making, accountability and organizational change and development.

## PUBA 604 Managing Human Resources (3)

This course considers the context and practice of effective human resource management, with special emphasis on the political, legal, historical, and ethical dimensions of public employment. Students will apply personnel management theories and techniques to contemporary organizational challenges to investigate the tensions inherent to balancing competing values and demands.

## PUBA 605 Managing Financial Administration (3)

This course examines the organization and techniques of governmental financial management, budgetary theories and intergovernmental financial relations.

## PUBA 611 Urban Policy (3)

This course will introduce students to the field of urban policy and will train students to critically analyze policy debates that directly impact city life. The course traces the major ideological shifts in urban policy over the past century, analyzes their historical and philosophical foundations and explores the relationship between urban change and policy formulation.

## PUBA 612 History and Theory of American Urban Planning

This course addresses the historical and theoretical underpinnings of urban and regional planning in the United States as it has evolved since the mid-nineteenth century. This course serves as a vehicle to examine the changing nature of the relationship between planning and urban development, and the impact of planning and planners on the built environment, economic development, and public policy.

## PUBA 613 Planning Law (3)

This course examines the application and administration of planning law at the local level.

## PUBA 615 Theories of Urban and Regional Development

 (3)This course is designed to provide the basic toolkit required to think critically and coherently about processes of urban and regional economic development. Major themes include the spatial distribution and location of economic activity; the concentration of economic activity in cities; how globalization affects these processes; and the impact of economic development on regional differences.

## PUBA 616 Local and Regional Economic Development: Policy and Practice (3)

This course examines the forces that drive regional growth and change and assesses the policies and practices that are commonly used in pursuit of economic growth, including industrial targeting, incentives, and human capital development.

## PUBA 620 Local Government Politics and Administration

 (3)This course examines the role of local government administrators as leaders and service providers. The course explores an understanding of local political environments and develops an understanding of what they mean in terms of democratic institutions and theory.

## PUBA 622 Intergovernmental Relations (3)

This course provides an understanding of the nature and dynamics of the American federal system of government: the functions, powers and service delivery capacities of county, municipal and special purpose district governments, the creation of new jurisdictions, the reciprocal influences of local, state, and federal bureaucracies, the grant-in-aid system and revenue sharing among different units of government. A special emphasis is placed on the complex nature of state-local and inter-local relations in an urban setting.

## PUBA 623 South Carolina Government and Policy (3)

This course will allow those students who intend to pursue administrative careers (either local government or state government) in South Carolina to become familiar with the state's political and policy processes.
PUBA 631 Administrative Law (3)
This course studies the legislative, adjudicatory and general policy-making powers of administrative agencies and regulatory commissions, and the scope of judicial review of
administrative action. The course is directed primarily toward an analysis of the political nature of bureaucracy, and secondarily toward the procedural requirements for administrative policy-making.

## PUBA 632 Environmental Politics (3)

This course is intended to provide students with a broad understanding of environmental politics in the United States. It examines the emergence of environmentalism, its social bases, its political impact and its political influence.

## PUBA 634 Environmental Law and Regulatory and Policy (3)

This course examines the development of environmental law and regulatory policy in the United States. It provides an overview of the scope and substance of environmental law and the various regulatory techniques they employ. Both criminal and civil litigation surrounding the implementation of environmental law are examined.

## PUBA 635 Land Use Law (3)

This course examines zoning and land use control in the United States and incorporates illustrations and cases from South Carolina in particular. It focuses on enabling legislation for local governments, regulation, the process of development, eminent domain, contract and conditional zoning and enforcement and violation of land use regulations.

## PUBA 637 Wetlands Protection (3)

This course is intended to provide the student with a broad understanding of the social origins, philosophies, and political, economic and cultural impacts of wetlands protection in the United States. Topics address the goals of and policymakers' approaches to wetlands protection.

## PUBA 640 Leadership and Decision Making (3)

This course examines leadership and decision making by identifying the environment of decision making, the techniques and characteristics of leadership styles and decision making approaches.

## PUBA 650 Essential Elements of Nonprofit Administration (3)

This course orients students to the history, values, and issues of the third sector in American society; and to the leadership and management challenges peculiar to the administration of non-profit organizations. The latter includes board relations, fundraising, program advocacy and lobbying, legal frameworks, human resource management in volunteer settings, financial management and grants administration.
Prerequisite: Completion of one semester in the M.P.A. program preferred.

## PUBA 654 Human Resource Management for Non-Profit Organizations (3)

This course examines the human resource development issues for non-profit organizations. Personnel play a vital role in the non-profit sector. Distinctively, this sector is dependent not only upon a core group of salaried employees, but upon a voluminous network of volunteers. There are specific issues
including training, development, and leadership, which take on unique characteristics in the non-profit sector. The course will center on the executive director's role in the success of shaping, managing and leading the organization.

## PUBA 655 Nonprofit Capacity Building (3)

The course will examine the current research on capacity building for nonprofits and its applicability. Students will investigate the components that contribute to an organization's effectiveness and sustainability over time and tools and approaches utilized by nonprofits to adapt and thrive in the midst of a rapidly changing environment.

## PUBA 656 Fundraising and Marketing for Nonprofits (3)

This course examines the development cycle and how nonprofits structure their giving and marketing programs. In addition to annual, major, and planned giving, the class will look at capital campaigns, the roles of boards and volunteers, grant writing, corporate and foundation giving, using technology and ethics and accountability.

## PUBA 660 Contemporary Perspectives on Arts Management (3)

This course will focus on the role of non-profit arts and cultural institutions, and the artists and managers that lead them. By examining the rapid changes occurring in the performing and visual arts management field, as well as the humanities, and analyzing the impact of these changes within the public domain, the course also seeks to encourage interested students to pursue careers in this dynamic profession.

## PUBA 661 Advanced Arts Management (3)

This course will involve students in the examination, analysis and involvement in applied experiences with non-profit arts and cultural organizations. Students will produce case studies in a variety of topical areas in arts administration that examine the resources, leadership, collaboration, skills, critical issues and practices of managers of select non-profit arts and cultural organizations in Charleston and the Tri-County region.

## PUBA 662 Cultural Administration and Applied Research At the Avery (3)

This course is the first course of its kind that uses the Avery Research Center for African American History and Culture as a laboratory to expose the students to what the Center does to serve the needs of a diverse market and constituency base. Through practical and service learning experiences, students will examine issues germane to public administration and education, arts administration and cultural management.

## PUBA 663 Arts and Technology (3)

Artists have always experimented with emerging technologies, but in recent decades the field of Arts \& Technology has emerged as a dynamic and historically significant artistic practice. Discover the opportunities new technologies offer to arts managers; initiatives at the convergence of art and technology and the impact of technology and the arts on culture. Examine and conceptualize the themes of new media, sound art, moving images, the media artist, cyber culture and intellectual property issues.

## PUBA 664 Arts Education (3)

This course will examine current trends in arts education. Dealing primarily from an administrative viewpoint, the course will focus on government funding (local, state, and national), arts education organizations, specific pilot programs and individual teaching situations. Although developed initially for the administrator, the course should prove equally valuable to the educator.

## PUBA 701 Capstone Seminar (3)

The capstone seminar is designed to be a culminating experience that helps the student integrate knowledge and skills acquired throughout the program. Students engage in applied research.
Prerequisite: Completion of all M.P.A. core courses and at least 30 semester hours or permission of the instructor or M.P.A. director.

## PUBA 705 Managing Public/Private Partnerships (3)

A shift in the social sector demands a reliance on private partnerships to provide public and nonprofit services. This course will provide an overview of these partnerships, study organizational models, and examine both public and nonprofit success stories leaving the student with a fresher perspective on public and nonprofit management.

## PUBA 706 Economic Theory for Policy Analysis (3)

This course develops and applies microeconomic models and theories to the analysis of contemporary public sector issues. Attention is given to the conceptual and practical problems associated with resource allocation decisions given conflicts between efficiency and equity and limited information.

## PUBA 710 Thesis (3)

In order to complete the thesis requirement a student must have a core MPA faculty member as their advisor along with a committee of three other faculty, one of whom must be a core USC faculty member. In order to register for thesis hours, the student must develop an independent study contract with their advisor containing an agreed upon research proposal and timeline. The final thesis must adhere to all the guidelines set forth in the Graduate School's Thesis Manual.

## PUBA 711 Independent Study (1-3)

Individual study of an agreed-upon topic under the direction of a core MPA faculty member, following a course of reading and other requirements proposed by the student and established by negotiation with the graduate faculty member.

## PUBA 720 The Practice of Public Administration (3)

The world of the practicing manager is complex. Making decisions with often severe limits on resources and time means that managers must consider various aspects of management personnel, legal accountability, resource management and ethics - in rapidly changing contexts. This seminar addresses these complexities by exploring particular cases in depth.
Prerequisite: Completion of 15 hours of core courses or permission of the instructor.

## PUBA 722 Information Systems and Public Administration

This course examines the development and uses of information systems in local, state, and federal administrative agencies with emphasis on the management of information systems in the public agency environment; the problems of interagency and intergovernmental relations; the politics of technological innovation; privacy, confidentiality, security, and information policy; and the role of information technology in democratic government

## PUBA 777 Internship (3)

A supervised field experience in which the student observes and participates in the functioning of a public sector or other nonprofit organization for at least 15 weeks.
Prerequisite: At least 15 credits earned in the M.P.A.
program. Permission of the M.P.A. director required. Graded on a satisfactory/ unsatisfactory basis.

# Master of Education in Science and Math for Teachers 

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## http://medsm.cofc.edu/

## Program Description

The School of Sciences and Mathematics and the School of Education, Health and Human Performance jointly offer a Master of Education in Science and Mathematics. This program offers graduate-level courses in the sciences, mathematics and education that address the needs of teachers and informal science educators. The program's intention is to strengthen and broaden the practicing teacher's and informal educator's science, mathematics and education knowledge and understanding for use in elementary, middle, and high school classrooms and informal science centers. It also provides a solid background for those who might eventually pursue a doctoral degree in science and mathematics education.
Content courses in science and mathematics will be offered by STEM faculty using pedagogical practices consistent with the discipline and appropriate for the $\mathrm{PK}-12$ classroom curriculum. Integrated courses blend several disciplines along a theme. Education content courses complement the science and mathematics content component of the program by emphasizing the relationships that exist among science and mathematics areas and across the $\mathrm{PK}-12$ curriculum.

## Minimum Admission Requirements

To be admitted to the degree program, an applicant is required to have a bachelor's degree or its equivalent with a GPA of 2.50 or better, both overall and in the major. This program is designed for certified elementary, middle, and secondary teachers, but it is possible to be admitted without certification. Exceptions will be considered on a case-by-case basis. Also required for admission are a $\$ 50$ nonrefundable application fee, official transcripts of all undergraduate and graduate coursework, a statement of professional goals, two letters of recommendation from individuals familiar with the applicant's academic and/or work experience and which indicate evidence of potential for success in graduate work, and official GRE or PRAXIS scores for content area exams. If Praxis II or content area scores are not available then scores from an equivalent state licensure test, which is approved by the South Carolina Department of Education, must be submitted. Additionally, the applicant is requested to submit a valid teaching certificate, if held. TOEFL scores must be submitted if English is not the applicant's primary language.

## Transfer Credit Policy

An applicant or student of the M.Ed. in Science and Mathematics for Teachers (SMFT) program can seek approval
from the Program Director to accept up to six transfer credit hours. These courses must have a grade of B or higher, and can count toward the M. Ed. in the SMFT degree requirements. Courses with a grade of "Pass" or "Satisfactory" will not be accepted. Also, note that the courses must be catalogue courses and not professional development courses to count in a program.

## Professional Development for Certified Teachers

Certified educators can enroll in professional development courses through the School of Education, Health and Human Performance Office of Professional Development in Education (OPDE). These courses, known as Professional Development Courses (EDPD) are used to modernize instructional strategies and offer content enrichment opportunities while leading to recertification points and pay scale advancements. These Professional Development credits offered through OPDE do not count toward the completion of an advanced degree such as the Master of Education or Master of Arts in Teaching. Please note that EDPD courses differ from Catalog Courses. A Catalog Course has been approved as part of a course of study in a College of Charleston graduate-level program. For more information regarding professional development courses, contact the OPDE Office at 843.953.7651.

## Assistantships

A number of graduate assistantships are available for full-time students. The awards will normally be made by April 15 for the following academic year. Assistantship applications should be completed by March 15. However, assistantships will be considered on an ongoing basis. Applications are found online at http://gradschool.cofc.edu. There is one graduate assistantship aligned with the SMFT program. This assistantship is connected with work associated with the Program Director. Please contact the program director personally if interested in this assistantship.

## Master of Education in Science and Math for Teachers Degree Requirements

A total of 36 hours will be required for completion of the program, with at least 30 earned at The Graduate School of the College of Charleston. Courses must be selected from the following four categories:

- Fundamental Education Curriculum (9 semester hours)
- Fundamental Science and Mathematics Curriculum (at least 14 semester hours)
- Integrated Science Courses (at least 6 semester hours)
- Capstone Experiences which include a Capstone Proposal Course (at least 7 semester hours) including at least one formal presentation
- 75 hours of field experience


## Fundamental Education Curriculum (9 Semester Hours)

EDFS 632 Learning Cognition and Motivation (3)
EDFS 635 Educational Research (3)

EDFS 660
Nature of Science, Mathematics, and Science/Mathematics Education (3)

## Fundamental Science and Mathematics Curriculum

(At least 14 semester hours: a minimum of one mathematics course and two science courses must be taken in this category.) Courses may be selected from:

EDEE 670 Elementary Science Instruction (3)
SMFT 510 Introduction to Problem Solving (3)
SMFT 511 Introduction to Probability and Statistics (3)
SMFT 514 Geometry for Elementary and Middle School Teachers (4)*
SMFT 516 Applications Across the Mathematics Curriculum with Technology (3)
SMFT 518 Applications of Calculus for Teachers (4)
SMFT 523 Earth Science for Teachers (4)
SMFT 524 Space Science for Teachers (4)*
SMFT 537 Topics in Botany for Teachers (4)
SMFT 538 Topics in Zoology for Teachers (4)
SMFT 540 Fundamentals of Physical Science (4)
SMFT 548 Atomic Theory of Matter from Lucretius to Quarks (3)
SMFT 555 Applications of Physics for Teachers: How Things Work (3)
SMFT 697 Special Topics in Science or Mathematics for Teachers (1-4)

## Integrated Science Curriculum

(At least 6 semester hours.)
EVSS 640 Earth Systems Science (3)
EVSS 650 Energy Production and Resource Management (3)
SMFT 516 Applications Across the Mathematics Curriculum with Technology (3)*
SMFT 524 Space Science for Teachers (4)*
SMFT 639 Genetics and Molecular Biology for Teachers (3)
SMFT 645 Physics of Force and Motion for Teachers (3)

SMFT 647 Determination of the Structure of Matter (3)
SMFT 697 Special Topics in Science or Mathematics for Teachers - if designated as integrated science (1-4)

## Capstone Experiences

(At least 7 semester hours.)
EDFS 703 Curriculum, Policy and Systems in Science \& Math (3)
SMFT 698 Independent Study (1-6)
SMFT 690 Capstone Project Development (1)
Additional Science \& Math content courses (3)
*SMFT 516 and SMFT 524 can be applied to satisfy the required credit hours for either the Fundamental Science and Mathematics Curriculum or the Integrated Science Curriculum - not both.

## Master of Education in Science and Math for Teachers Capstone Experiences

(at least seven semester hours)
Students have four basic options for completing category C requirements. All of these options include SMFT 690, Capstone Proposal. A written capstone proposal from SMFT 690 is necessary. Students must complete a project associated with at least one course. The advisor and Steering Committee must approve the project proposal prior to taking the content course, and the student must make a final presentation of the project. Students can:

- Take the three-credit course EDFS 703 Curriculum, Policy, and Systems in Science and Mathematics Education, take an additional B1 or B2 or MS degree program three-credit course in science, AND complete a project related to one of the courses.
- Take an extra course from either Category B1 (Fundamental Science and Mathematics Curriculum) or B2 (Integrated Science), or an appropriate course not in the program, AND complete an Independent Project (SMFT 698) in which the project is completed under the guidance of an advisor for three credits.
- Complete an Independent Project (SMFT 698) for six credits in science, mathematics, or science or mathematics education. This, too, requires discussion with the advisor, consent from the individual (s) supervising the project, and approval of a written proposal. The six credit Independent Project (SMFT 698) is the equivalent of two, three-credit graduate courses in terms of work and time.
- Take up to six credit hours from an M.S. degree program offered by the School of Sciences and Mathematics at the College of Charleston, SC including Environmental Studies (but not EVSS 640 and EVSS 650, each of which count in Category B2), Marine Biology, or Mathematics. The purpose of this option is to give interested students opportunities to work at an advanced level in a science or math subject. The student must meet any course prerequisites.


## Master of Education in Science and Math for Teachers Field Experience Options

The SMFT program requires significant field experience prior to graduation. Students may acquire this experience in their own classroom, as a visitor in a classroom, or in a nonclassroom educational setting such as a museum or aquarium. The required field experiences in EDFS 635 and 660 will be 25 hours each. The field experiences will be designed, implemented and evaluated by the candidate with written assignments in each course and for the Independent Capstone Project. The assignments for EDFS 632 and 660 will be submitted to the course professor. The remaining required field experience will be attained by the development of an independent project, a class project, and/or a capstone project of the student's choice that is implemented in any of the above
settings. Each student will complete at least 25 hours of field experiences to meet this requirement. The total number of formal field experience hours across the program will be at least 75 hours.
The course EDFS 632 Education Psychology Learning, Cognition, and Motivation is required of all students and includes 25 hours of field experience. It examines current research on human learning and practical applications of what we know about learning to the design of curriculum, teaching and assessment. The students use this to design and carry out the required field experience project.
The course EDFS 660 Nature of Science, Mathematics and Science and Mathematics Education, also required of all students, examines the philosophies of science/mathematics education and how the nature of scientific research should guide the teaching of science and mathematics. The students carry out 25 hours of field experience utilizing their enhanced understanding of science education.
The final 25 hours or field experience is designed by each candidate individually with the guidance of a faculty advisor. This is usually done as part of a capstone project and the candidate is required to make an oral presentation about their project to an audience composed of faculty members and their peers.

## Science and Math for Teachers Course Descriptions

$\dagger$ Courses in this program address national and state science and mathematics standards.

## EDEE 670 Elementary Science Instruction (3)

A course for elementary teachers who have at least partial responsibility for science teaching. It focuses on comprehension and application of integrated science process skills using concepts from life, earth and physical science to teach them.

## EDFS 632 Education Psychology Learning, Cognition, and Motivation (3)

Orientation to the psychology of learning and instruction, the development of theoretical models as well as empirical bases for making decisions. This course examines current research on human learning including advances in the study of learning as well as practical applications of what we know about advances in the study of learning as well as practical applications of what we know about learning on the design of curriculum, teaching, and assessment. The course covers important concepts and theories in educational, cognitive, and social psychology and offers the student opportunities to develop their teaching skills through application of the theories and concepts with attention to the realities of teaching. (spring)

## EDFS 635 Educational Research (3)

An in-depth study of methods used in different types of educational research. Includes involvement of the student in the process of educational research design, implementation, reporting, and evaluation. (fall, spring and summer)

## EDFS 660 Nature of Science, Mathematics, and Science/Mathematics Education (3)

Topics include the historical development of science and mathematics and the variety of philosophies in science/mathematics education. Other topics include social trends affecting science education in the United States since 1900, including reform movements of 1904, 1937, 1945, 1960 and the present; and local frameworks addressing national and global concerns. (spring or summer)

## EDFS 703 Curriculum, Policy, and Systems in Science and Mathematics Education (3)

This course is designed to examine possible solutions to current problems in curriculum and policy within school systems in South Carolina. This course is designed to increase organizational and interpersonal skills that empower teachers to alter school climates and garner technical support while designing and implementing $\mathrm{K}-12$ programs of excellence. (spring)
Prerequisites: 15 hours credit in the SMFT program or permission of the instructor.

## EVSS 640 Earth Systems Science (3)

This course investigates the interactions among the atmosphere, ocean, ice, solid-Earth, and biological systems. Students study the evolution of solid Earth, the formation of the atmosphere and oceans, and the origin of life. Rate and scale of changes of the Earth's environment are examined through an analysis of changing climates. Finally, the course examines human evolution and technological development to gain an understanding of human impacts on the global environment.

## EVSS 650 Energy Production and Resource Management (3)

A study of the nature of energy and scientific issues relating to its production, storage, distribution, and use from a physics perspective. Production methods to be studied include: hydroelectric, fossil fuel, fission, fusion, wind, photovoltaic, biomass and solar-dynamic. Scientific issues will be related to the cultural and philosophical framework surrounding energy infrastructure and policy.

## SMFT 510 Introduction to Problem Solving (3)

A course designed primarily for elementary and middle-level teachers to investigate mathematics topics through problemsolving activities. Topics covered will include numeric and algebraic concepts and operations; patterns, relationships and functions; geometry and spatial sense and measurement. The NCTM Standards, NCTM Addenda Series and the South Carolina Mathematics Curriculum Framework will serve as a basis for the nature and content of activities. Graduate credit only. $\dagger$

## SMFT 511 Introduction to Probability and Statistics (3)

This course is designed primarily for elementary and middlelevel teachers. The course will examine methods of statistical measurement and their uses and misuses in interpreting and describing data. The course also addresses variation, the underlying framework and application of basic probability
distributions and inductive reasoning through probability. Graduate credit only. $\dagger$

## SMFT 514 Geometry for Elementary and Middle School Teachers (4)

This course will investigate plane and geometric shapes, transformations, lines and coordinate geometry and measurement. Students will investigate geometric formulas, theorems and simple proofs through a hands-on approach that includes developing geometric constructions, making models and using technology. $\dagger$

## SMFT 516 Applications Across the Mathematics Curriculum with Technology (3)

This course, intended for practicing middle and secondary school teachers, explores applications of mathematics which use geometry, trigonometry, probability and statistics, networks, matrices and linear programming. We will develop practical classroom presentations of various applications, and integrate computer and graphing calculator activities into these classroom modules. Graduate credit only. $\dagger^{* *}$

## SMFT 518 Applications of Calculus for Teachers (4)

A course designed primarily for secondary science and math teachers to investigate applications of calculus in science and technology. Topics will include a review of limits, derivatives and integration techniques, as well as applications to physics, geology, chemistry, biology and technology. Investigative labs, utilizing data collection, and interdisciplinary projects will be major components of the course.
Prerequisites: One undergraduate calculus course and the student teaches secondary science or mathematics. $\dagger$

## SMFT 523 Earth Science for Teachers (4)

This course will cover the fundamentals of earth science and its application to environmental issues. We will explore the history of Earth's formation and the dynamic processes that continue to shape and alter the Earth's surface. Discussion and hands-on activities will be geared toward the understanding of "how the Earth works," Earth's dynamic formation and metamorphosis and the interconnectedness of the solid Earth with the hydrosphere and atmosphere. Graduate credit only. $\dagger$

## SMFT 524 Space Science for Teachers (4)

This course will consist of two components: astronomy and comparative planetology. Students will learn the physical properties of the solar system and the geological characteristics of the planets and moons within the context of the origin of the solar system. Astronomy will be used to develop an understanding of stellar evolution and composition of the cosmos. Students will use acquired conceptual knowledge to develop classroom activities appropriate for middle and high school students. Teaching methods will include a variety of teaching methods appropriate for middle and high school classroom. **

## SMFT 537 Topics in Botany for Teachers (4)

This course will focus on plant structure and physiology. The course will cover the evolution of diversity in the plant kingdom, processes of growth, reproduction and development
and basic principles of plant ecology. The course will include workshops and field trips to help teachers translate content information into classroom activities. $\dagger$

## SMFT 538 Topics in Zoology for Teachers (4)

This course will provide an introduction to animal diversity with emphasis on South Carolina species and their habitats. It will address the anatomy and physiology of animals. The fundamental concepts of genetics and evolution will be introduced through appropriate model organisms. Graduate credit only.
Prerequisites: One year of college biology or permission of the instructor. $\dagger$

## SMFT 540 Fundamentals of Physical Science (4)

The course will explore the creative nature of science, build observational and descriptive skills, discover laws of chemistry and physics, familiarize students with and use the tools of science (from meter sticks to computers) and develop instructional, hands on activities for students appropriate for the $\mathrm{K}-8$ classroom. Graduate credit only. $\dagger$

## SMFT 548 Atomic Theory of Matter From Lucretius to Quarks (3)

This course looks at milestones in the development of atomic theory as a means to understand the basic concepts of modern theories of the nature of matter and as a means to convey the dynamic nature of model building in science. Data that led to the atomic theory, the concept of energy states of atoms, the discovery of elemental materials and proposals as to the nature of the nucleus will be explored.
Prerequisites: One year of teaching high school chemistry, physics or physical science; or one year of college chemistry or physics; or permission of the instructor. $\dagger$

## SMFT 555 Applications of Physics for Teachers: How Things Work (3)

This course will develop an understanding and appreciation of the concepts and principles of physics by examining objects of everyday experiences. Items such as a microwave oven, vacuum cleaner or elevator will be explored for the physics that makes them work. Historical and social perspectives of science will also be discussed. $\dagger$

## SMFT 637 Biotechnology (4)

This course will cover approaches and techniques that are used in biotechnology. The structure of proteins and DNA will be reviewed and the importance of these molecules in biotechnology will be discussed. Techniques to be described in the course include gel electrophoresis, hybridization techniques and basic cloning techniques. Applications of these techniques will be discussed along with ethics issues raised by their use. Graduate credit only.
Prerequisites: One year of college biology or one year of college chemistry or permission of the instructor. $\dagger$

SMFT 639 Genetics and Molecular Biology for Teachers (3)
The course will introduce teachers to content and methodology necessary to effectively teach genetics and
molecular biology at the high school level. Many of the topics may be suitable (or can be modified) for the middle school classroom. Topics addressed in the course will include Mendelian and chromosomal genetics, evolutionary genetics, molecular biology (the path from gene to protein),
biotechnology and the ethical implications of this new technology. Graduate students only.

Prerequisites: One year of college biology. $\dagger$

## SMFT 645 The Physics of Force and Motion for Teachers

 (3)The laws of force and motion will be examined in a lecture, discussion and laboratory environment. Students will enhance their skills employing logical and mathematical techniques to solve problems, using appropriate scientific equipment from meter sticks to computers, and develop teaching methods suitable for the $\mathrm{K}-8$ classroom. Graduate credit only. $\dagger$

SMFT 647 Determination of the Structure of Matter: Analytical Tools Employed Across the Science Curriculum (3)

The interaction of matter and light allows chemists, physicists, biologists, astronomers and geologists to study the nature of matter. This course will investigate the application of absorption and emission spectroscopy across a broad range of the electromagnetic spectrum, X-ray crystallography, laser technology and remote sensing developments to explore the nature of matter from the atomic level to galaxies. Each topic introduced will be related to the $9-12$ th curriculum and to the South Carolina standards. $\dagger$

## SMFT 690 Capstone Proposal (1)

This course will cover the basics of preparing a capstone proposal. The history and social perspectives for an Institutional Review Board (IRB) will be explored. Collaborative Institutional Training Initiative will be completed so that social science projects can be submitted to the IRB. Capstone proposals will be presented to peers and professors.

## SMFT 697 Special Topics in Science Or Mathematics for Teachers (1-4)

This is a one-semester course introduction to an advanced topic in science, integrated science or mathematics education.
Notes: Since the content for this course is variable, it may be repeated for graduate credit. $\dagger$

## SMFT 698 Independent Study (1-6)

Independent study with coursework agreed upon between student and instructor. May be repeated up to a total of six (6) hours of credit.

# Master of Arts in Teaching Special Education 

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## http://teachered.cofc.edu/grad-progs/edsp.php

## Program Description

The Master of Arts in Teaching (M.A.T.) Special Education is nationally accredited by the Council for Exceptional Children and by the South Carolina Department of Education. Most coursework in this program is taught by full-time faculty members (holding terminal degrees in their fields), who have extensive teaching experience and maintain active research and service agendas. Coursework is offered in late afternoon and evening sessions Monday through Thursday for fall and spring terms and in day and evening sessions during the summer terms. Students may enroll as part-time or full-time candidates. Full-time graduate students may be eligible for graduate assistantships through the Graduate School.

## Master of Arts in Teaching Special Education (K-12)

The M.A.T. in Special Education is designed for individuals with undergraduate degrees in areas other than education who want to become licensed special education teachers. The program includes three areas of study: emotional disabilities, learning disabilities and mental disabilities. The Program of Study currently requires a minimum of 39 hours of graduate credit. If candidates have not recently taken a course in human growth and development or developmental psychology, they must take that course.
Successful completion of the M.A.T. Program of Study, including the teacher education requirements, leads to recommendation for licensure in South Carolina in the student's area of concentration. Teacher education requirements include successful clinical practice during a fulltime semester, passing the specialty Praxis exams, and other School of Education, Health, and Human Performance and South Carolina Department of Education requirements that can be found on the program's website. Candidates should consult this website for changes in program or state requirements.

## Minimum Admission Requirements for the M.A.T. in Special Education

Candidates should submit the following application materials to The Graduate School.

- A completed application form with a nonrefundable application fee of $\$ 50$.
- Official transcripts of all undergraduate and graduate coursework. An earned bachelor's degree from an accredited college or university is required. Applicants are
required to have a minimum cumulative undergraduate GPA of 2.5 on a 4.0 scale. Undergraduate coursework should represent a broad liberal arts background.
- A statement of goals stating why the candidate seeks to be part of the program and is pursuing a teaching career.
- Two letters of recommendation. Letters should be from persons most familiar with previous academic and/or work experience and should indicate evidence of potential for graduate studies.
- A professional résumé
- Results of the Test of English as a Foreign Language (TOEFL), if English is not the primary language of the candidate
- Official scores from the Graduate Record Examination (GRE)
- A statement of ability to perform essential teaching duties under the Americans with Disabilities Act (ADA)
These requirements are subject to change before the next catalog is printed. Application packages are available through the Graduate School or online. The deadline for Fall applications to the M.A.T. in Special Education for students planning to attend full-time is April 1. However, applications may still be reviewed until July 15 if there are slots left unfilled after the April 1 deadline. Potential applicants should contact the program director to determine if this is the case.
* Applicants who plan to, at least initially, complete the program on a part-time basis, may apply for admission during fall, spring or summer semesters in order to begin taking courses the following semester.


## Transfer Credit Policy

An applicant or student from the M.A.T. in Special Education program can seek approval from the program director to accept up to six transfer credit hours from an accredited program. The courses proposed for transfer will be reviewed by the faculty advisors in the discipline area for relevancy to the program. These courses must have a grade of B or higher, and may count toward the degree requirements. Courses with a grade of "Pass" or "Satisfactory" will not be accepted.

## Degree Requirements for the M.A.T in Special Education

The M.A.T in Special Education is awarded to candidates who successfully complete an approved, performance-based program of study consisting of a minimum of 39 semester hours of credit with a minimum overall GPA of 3.0.

Requirements for recommendation for licensure by the South Carolina Department of Education are described in the teacher education program information packet and the Clinical Practice Handbook. Successful completion of clinical practice requirements and passing scores on the Praxis specialty exams corresponding with the candidate's area of concentration are two of the requirements for licensure recommendation. The Praxis specialty exams should not be taken prior to specialty coursework completion. It is the candidate's responsibility to register for these exams and have scores sent to the School of Education, Health, and Human Performance and the South Carolina Department of Education.

## Title II Report Card

The College of Charleston Title II Report Card can be located by going to the South Carolina Department of Education Title II website, http://title2.ed.gov. Additionally, copies of the report can be requested by contacting the director of the Office of Student Services and Certification at 843-953-5613 or 86 Wentworth Street, College of Charleston, Charleston, S.C. 29424-0001. To discuss the College of Charleston Title II Report Card, contact the dean of the School of Education, Health, and Human Performance at 843.953.5613.

For the purposes of Title II reporting, a program completer is defined as a candidate who has successfully completed clinical practice.

## Professional Development for Certified Teachers

Certified educators can enroll in professional development courses through the School of Education, Health, and Human Performance's Office of Professional Development in Education (OPDE). These courses, known as professional development courses (EDPD), are used to modernize instructional strategies and offer content enrichment opportunities while leading to recertification points and pay scale advancements. These professional development credits offered through OPDE do not count toward the completion of an advanced degree such as the Master of Education or Master of Arts in Teaching. For more information regarding professional development courses, contact the OPDE Office at 843.953.7651.

Please note that EDPD courses differ from catalog courses. A catalog course has been approved as part of a course of study in a College of Charleston graduate-level program. These courses are ones that are offered through a contract course arrangement and count towards a master's degree in a specific discipline area (i.e.: M.A.T. and M.Ed. programs). They are awarded graduate credit, reviewed, and accepted by the specific discipline/curriculum involved.

## Master of Arts in Teaching Special Education Program of Study

Upon admission as a regular degree student, each candidate will be assigned a faculty advisor. The candidate should make an appointment with the advisor to complete an official Program of Study form. The Program of Study is not official until it is signed by the student, advisor, and program director and has been filed with the Graduate School. The candidate may not enroll in more than six hours of coursework without an official Program of Study. After coursework has commenced, needed changes in the Program of Study may be made in consultation with the candidate's advisor and approved by the program director and department chair.

The recommended Program of Study for the M.A.T in Special Education follows. Consult the program's website or an advisor for the recommended sequence of coursework, as many courses are offered only once a year but have specific prerequisites. Also note that EDFS 710, Introduction to Exceptional Children and Youth, may be taken as a nondegree student with professor permission.

## Fundamental Curriculum (12-15 Credit Hours)

EDFS 635 Educational Research
EDFS 654 Human Growth and Development*
EDFS 687 Introduction to Educational Technology
EDFS 714 Introduction to Curriculum and Instruction in Special Education
EDFS 725 Classroom and Behavior Management
*EDFS 654 is required if a comparable course has not been taken recently.
Specialized Curriculum (18 Credit Hours)
EDFS 710 Introduction to Exceptional -Children and Youth*
EDFS 720 Educational Assessment of -Students with Disabilities *
EDFS 724 Reading and Language Arts for Students with Disabilities
EDFS 748 Field Experience in the Instruction of Exceptional Children

* Course has field hours as part of course requirements.


## Concentration Areas (Minimum 6 Credit Hours)

## Teaching Students with Emotional Disabilities:

EDFS 730 Characteristics of Individuals with Emotional Disabilities
EDFS 731 Educational Procedures for Individuals with Emotional Disabilities

Teaching Students with Learning Disabilities:
EDFS 740 Characteristics of Students with Learning Disabilities
EDFS 741 Educational Procedures for Students with Learning Disabilities
Teaching Students with Mental Disabilities:
EDFS 750 Characteristics of Individuals with Mental Disabilities
EDFS 751 Educational Procedures for Individuals with Mental Disabilities

## Clinical Practice* (9 Semester Hours)

EDFS 797 Clinical Practice in Special Education
Note: Students may undertake additional coursework and field experiences to specialize in more than one area of special education.

* Note: It is the policy of the School of Education, Health, and Human Performance that assignments for field experience and clinical practice placements are made within the tri-county area. If an appropriate placement is not available within the tri-county area, the School of Education, Health, and Human Performance reserves the right to place the student in the closest appropriate setting.


## Teaching Special Education Course Descriptions

## EDFS 535 Teaching Literacy to Adults (3)

A course designed for individuals who work with adults lacking proficient literacy skills. Focuses on characteristics
and learning styles of older adolescents and adult learners. Topics of study include diagnostic techniques, instructional materials, teaching strategies and community resources.

## EDFS 630 Introduction to Educational Supervision (3)

Basic concepts of contemporary educational supervision as they relate to teachers in leadership positions. Includes models for the supervision of student teachers, other teachers and school personnel as well as the supervision of instruction and curriculum.

## EDFS 631 Instructional Media (3)

A basic course designed to familiarize the student with the use of instructional media in education. The methods of program design, production, and evaluation are studied and implemented.

## EDFS 632 Education Psychology Learning, Cognition, and Motivation (3)

Orientation to the psychology of learning and instruction, the development of theoretical models as well as empirical bases for making decisions. This course examines current research on human learning including advances in the study of learning as well as practical applications of what we know about advances in the study of learning as well as practical applications of what we know about learning on the design of curriculum, teaching, and assessment. The course covers important concepts and theories in educational, cognitive, and social psychology and offers the student opportunities to develop their teaching skills through application of the theories and concepts with attention to the realities of teaching. (spring)

## EDFS 635 Educational Research (3)

An in-depth study of methods used in different types of educational research. Includes involvement of the student in the process of educational research design, implementation, reporting, and evaluation. (fall, spring and summer)

## EDFS 645 Discipline - a Total Approach (3)

A comprehensive model for behavior management which includes preventive discipline techniques, appropriate intervention strategies, instructional considerations, classroom structure, the role of the principal and teacher, and student self-concept. The dynamics of disruptive student behavior and a personal responsibility approach to behavior management are presented for use with persistent behavior problems.

## EDFS 646 Cognitive Approaches for Developing SelfEsteem (3)

An in-depth study of the importance of self-esteem as related to student motivation, achievement, and behavior. Emphasizes cognitive approaches to the development of self-esteem and the relationship between self-esteem and teacher performance.

## EDFS 647 Strategies for Teaching Critical Thinking (3)

A focus on strategies to enhance critical thinking skills in grades K-12 across all curricular areas. Includes study of the relationship between critical thinking, student achievement, and motivation. Highlights current research on higher-order thinking skills, creative problem solving and decision making.

## EDFS 651 Orientation to the Profession of Special Education (1)

This course will explore the roles and responsibilities of special educators as professionals serving students with disabilities and the families, agencies, and professionals central in these students' lives. Orientation to the ethical and professional standards that guide the profession will provide a framework for organization of future coursework and practical experiences in the program.

## EDFS 652 Foundations of Education (3)

In-depth study integrating concepts and information from major social sciences and philosophy to examine the problem of teaching in modern schools. Historical approaches are used to focus on cultural, socioeconomic and political issues affecting education. (fall, spring, and summer)

## EDFS 654 Human Growth and Development (3)

The study of general principles of lifelong human growth and development and the relationship of teaching and learning theories to physical, social, intellectual and emotional development. (fall, spring and summer)

## EDFS 656 Program Planning and Development for the Gifted (3)

This course provides students with the fundamental principles of gifted program development. It addresses areas such as student identification procedures with a particular focus on gifted with special needs, curriculum development, staff development, personnel and resource utilization, budgeting, staff selection, needs assessment, evaluation, written plan development and change agent strategies.

## EDFS 660 Nature of Science, Mathematics, and Science/Mathematics Education (3)

Topics include the historical development of science and mathematics and the variety of philosophies in science/mathematics education. Other topics include social trends affecting science education in the United States since 1900, including reform movements of 1904, 1937, 1945, 1960 and the present; and local frameworks addressing national and global concerns. (summer)

## EDFS 675 Success in Reading and Writing (3)

A study of the structured use of reading materials from the daily world of the elementary school child such as newspapers, magazines and children's books. Using these materials, participants learn to teach effectively without ability grouping and to organize classroom time to include all elements of a total language arts program.

## EDFS 685 Independent Study in Education (1-3)

Graduate students may undertake an individually supervised study of a special topic in education chosen by the student. Each project is done in consultation with a member of the graduate faculty qualified to guide and evaluate the student's work. Time deadlines must be set before initiation of the project.

Prerequisite: Permission of the instructor and department chair are required.

## EDFS 686 Special Topics in Education (1-6)

An intensive study of an approved special topic in the field of education. No more than three hours may be taken under this listing during an academic semester or its equivalent.
Prerequisite: Permission of the instructor is required.

## EDFS 687 Introduction to Educational Technology (3)

This is an introductory course for pre-service and in-service teachers using technology in the classroom. Students become familiar with application software such as word processing, databases and hypermedia, desktop publishing and telecommunications, and learn to evaluate hardware and software. (fall, spring and summer)

## EDFS 688 Techniques for Teaching Logo (3)

A study of the philosophy and techniques for teaching Logo and its use in the development of problem solving and higherorder thinking. The course includes learning Logo primitives and techniques for incorporating these into the educational curriculum. Illustrative programming problems require exploration and creativity and include utilization of Logo's ability to handle numbers, words, and lists in an interactive manner.

Prerequisite: EDFS 687 or equivalent or permission of the instructor.

## EDFS 689 Application of Telecommunications in the Classroom (3)

This course provides information that allows students to incorporate telecommunications into their classroom using local bulletin board systems, Internet, and commercial information services. They learn to send and receive e-mail and post messages, both locally and internationally; send and receive files; and do electronic research. (fall)
Prerequisite: EDFS 687 or equivalent or permission of the instructor.

## EDFS 690 Use of Technology in Reading, Language Arts and Social Studies (3)

Critical review of software and hardware in reading, language arts and social studies. Includes techniques for integrating technology into the curriculum and evaluating effectiveness. (summer)
Prerequisite: EDFS 687 or equivalent or permission of the instructor.

## EDFS 691 Use of Technology in Math and Science (3)

Designed to expose participants to skills and techniques for using technology, software, and hardware to improve the instruction of mathematics and science. Participants review current mathematics and science software, develop activities to incorporate technology into the mathematics and science curriculum and design problem-solving activities. (spring)

Prerequisite: EDFS 687 or equivalent or permission of the instructor.

## EDFS 692 Advanced Technology Applications in Education (3)

This course incorporates technologies including: laser discs, CD-ROM, video and audio digitizing and hypermedia with advanced techniques, such as importing files, to create finished software programs. The class is based on using hypermedia as an authoring system, related technologies, and incorporating instructional design theory to create educational software. (spring)
Prerequisite: EDFS 687 or equivalent or permission of the instructor.

## EDFS 697 Special Topics in Technology (3)

An intensive study of an approved special topic in the field of educational technology. No more than three hours may be taken under this listing during an academic semester or its equivalent.

Prerequisite: Permission of the instructor.

## EDFS 700 Thesis (3)

A research project completed under the guidance of a graduate faculty member and submitted and defended before a graduate committee.

## EDFS 701 Thesis (3) <br> Continuation of EDFS 700.

## EDFS 702 Research and Development Project (3)

An in-depth study of an individually chosen topic, which is planned and completed under the guidance of the student's advisor and submitted for review by the graduate faculty.

## EDFS 703 Curriculum, Policy, and Systems in Science and Mathematics Education (3)

This course is designed to examine possible solutions to current problems in curriculum and policy within school systems in South Carolina. This course is designed to increase organizational and interpersonal skills that empower teachers to alter school climates and garner technical support while designing and implementing $\mathrm{K}-12$ programs of excellence. (spring)
Prerequisite: 15 hours credit in the SMFT program or permission of the instructor.

## EDFS 705 Reflective Practice and Professional Development (3)

This course, an intensive study of how professional frameworks guide educators' professional development, focuses on knowledge and skills linking ongoing reflective practice to improve pedagogy, student outcomes and professionalism. Educational research in the areas of portfolio assessment, teacher as researcher, and teacher as reflective practitioner is emphasized.

## EDFS 710 Introduction to Exceptional Children and Youth (3)

An introductory course designed for general and special educators. An interdisciplinary approach to the study of the learning and behavioral characteristics of exceptional children
and youth. Includes causes, identification, educational and community programs and provisions. Observation required (10 hours). (fall and summer)

## EDFS 711 Differentiating Instruction to Meet the Needs of Diverse Learners (3)

This course is designed for general and special educators to meet the needs of students in inclusive classrooms (preK-12). Teachers learn how to differentiate instruction to meet the needs of students who are performing in ranges from gifted to significantly below average. This course provides strategies for all learners, and examines the over and under identification of racial and ethnic minorities in special and gifted education programs.

## EDFS 712 Transitional Programming for Exceptional Children and Youth (3)

Designed for general and special educators, this course focuses on transition issues affecting exceptional children and youth. Educators acquire the knowledge and skills to plan and implement appropriate transition services, including career and vocational education. Procedures to facilitate student career decision making are covered. (summer)
Prerequisite: EDFS 710 or equivalent or permission of the instructor.

## EDFS 713 The Special Educator as Consultant (3)

A course designed to prepare special education teachers and support personnel to work with classroom teachers, principals, and other school personnel serving exceptional children. The course includes a review and application of consultation models, techniques, evaluation and research. (fall)

Prerequisite: EDFS 710 or equivalent or permission of the instructor.

## EDFS 714 Introduction to Curriculum and Instruction in Special Education (3)

This course is designed to provide students with knowledge and skills related to research-based, validated "best" practices for determining curriculum and implementing instruction for students with mild and moderate disabilities. The course focuses on three major models of instruction: explicit instruction, direct instruction and strategy instruction. (fall)

Prerequisite or Co-requisite: EDFS 710.

## EDFS 715 Exceptional Children and Youth: Medical Perspectives (3)

An interdisciplinary study of exceptional children and youth from a medical perspective as related to the special educator. Disciplines represented include pediatrics, neurology, ophthalmology, orthopedics, psychiatry, etc.
Prerequisite: EDFS 710 or equivalent or permission of the instructor.

## EDFS 716 Working with Families of Exceptional Children and Youth (3)

This course is designed to prepare special educators and other service providers to enter into collaborative decision making with parents. The course focuses on development of skills and
knowledge that can be used during parent conferences, including Individualized Education Program (IEP) and Individualized Family Services Plan (IFSP) planning conferences. Methods that can be used to promote ongoing communication and support between families and professionals are addressed, along with approaches that can be used during parent education and training. (alternate fall)
Prerequisite: EDFS 710 or equivalent or permission of the instructor.

## EDFS 717 Technology Applications in Special and Remedial Education (3)

Instruction in the use of technology and augmentative equipment with students who have special needs. Includes use of adaptive devices for individuals with disabilities, use and evaluation of a variety of applicable software and management software for special and remedial teachers. (summer)
Prerequisite: EDFS 687 or equivalent or permission of the instructor.

## EDFS 718 Trends and Issues in Special Education (3)

A review of current trends and issues in special education as these relate to local, state and national education agencies and the education of exceptional children and youth. (spring)
Prerequisite: EDFS 710 or equivalent or permission of the instructor.

## EDFS 720 Educational Assessment of Students with Disabilities (3)

A study of the selection, administration, and interpretation of formal standardized educational measures. Includes the application of assessment information to individualized education programs for exceptional children and youth. Field hours are required. (spring)
Prerequisites: EDFS 710 or equivalent or permission of the instructor.

## EDFS 721 Advanced Educational Assessment of Students with Disabilities (3)

An advanced course designed as a continuation of EDFS 720. Students pursue an in-depth study of measures designed for the assessment of learning and behavioral characteristics of students with mild, moderate and severe disabilities.
Individual focus is on those measures in student's area of interest.

Prerequisite: EDFS 720 or equivalent or permission of the instructor.

## EDFS 724 Reading and Language Arts Instruction for Students with Disabilities (3)

This course is an in-depth study of research-based methodologies for reading and written expression assessment and instruction for $\mathrm{K}-12$ students with emotional, learning or mental disabilities. The course will focus on developmental, corrective and strategic approaches and requires students to demonstrate competence in planning individualized reading and written language programs. (fall)

Prerequisites: EDFS 710 or equivalent or permission of the instructor; EDFS 714 or other introductory curriculum and instruction course.

## EDFS 725 Classroom and Behavior Management (3)

A study of a variety of management systems with focus on specific techniques and their application in the classroom. (spring and summer)

## EDFS 726 Advanced Classroom and Behavior Management (3)

A seminar designed for the in-depth study of applied behavior analysis and its application in academic settings. Techniques for data-based program modifications are applied to social and academic behavior of students. (summer)

Prerequisite: EDFS 725 or equivalent.
EDFS 730 Characteristics of Individuals with Emotional Disabilities (3)
An in-depth study of the unique learning and behavioral characteristics of children and youth with emotional disabilities. Includes theory and practice related to identification and educational community programs and provisions for this exceptionality. (spring)
Prerequisite: EDFS 710 or equivalent or permission of the instructor.

## EDFS 731 Educational Procedures for Individuals with Emotional Disabilities (3)

An in-depth study of educational procedures used to teach children and youth with emotional disabilities. Includes teaching procedures, development and use of materials and individual and classroom management techniques. (fall)
Prerequisite: EDFS 730.

## EDFS 740 Characteristics of Students with Learning Disabilities (3)

An in-depth study of the unique learning and behavioral characteristics of children and youth. Includes theory and practice related to identification and educational and community programs, and provisions for this exceptionality with learning disabilities. (spring)
Prerequisite: EDFS 710 or equivalent or permission of the instructor.

## EDFS 741 Educational Procedures for Students with Learning Disabilities (3)

An in-depth study of educational procedures used to teach children and youth with learning disabilities. Includes teaching procedures, development and use of materials. (fall)
Prerequisite: EDFS 740.

## EDFS 748 Field Experience in the Instruction of Exceptional Children (3)

This course is a supervised field experience involving 75 hours of direct contact with exceptional children or youth. The student will plan and deliver instruction to individual pupils and small groups. Students will be placed in their area of specialization (i.e., LD, ED, MD). (fall)

Prerequisite: EDFS 731 or EDFS 741 or EDFS 751.

## EDFS 750 Characteristics of Individuals with Mental Disabilities (3)

An in-depth study of the unique learning and behavioral characteristics of children and youth with mental disabilities. Includes theory and practice related to identification and educational and community programs, and provisions for this exceptionality. (spring)
Prerequisite: EDFS 710 or equivalent or permission of the instructor.

## EDFS 751 Educational Procedures for Individuals with Mental Disabilities (3)

An in-depth study of educational procedures used to teach children and youth with mental disabilities. Includes teaching procedures, development and use of materials, and classroom management techniques. (fall)
Prerequisite: EDFS 750.

## EDFS 760 Characteristics of the Gifted and Talented (3)

An in-depth study of the unique learning and behavioral characteristics of children and youth who are gifted and talented. Includes theory and practice related to identification and educational and community programs, and provisions for this exceptionality.
Prerequisite: EDFS 710 or permission of the instructor.

## EDFS 761 Educational Procedures for the Gifted and Talented (3)

An in-depth study of educational procedures used to teach children and youth who are gifted and talented. Includes teaching procedures, development and use of materials, and curriculum development.
Prerequisite: EDFS 760.

## EDFS 762 Practicum in Instruction of the Gifted and Talented (3)

A supervised field experience requiring a minimum of 75 clock hours of direct contact with children and youth who are gifted and talented.
Prerequisite: EDFS 761.

## EDFS 765 Characteristics of the Young Exceptional Child (3)

An in-depth study of the unique learning and behavioral characteristics of young children with exceptionalities. Includes theory and practice related to identification and educational and community programs, and provision for this exceptionality.

Prerequisite: EDFS 710 or permission of the instructor.

## EDFS 766 Educational Procedures for the Young Exceptional Child (3)

An in-depth study of the educational procedures used to teach young children with exceptionalities. Includes teaching procedures, development and use of materials, and individual and classroom management techniques.

Prerequisite: EDFS 765.

## EDFS 767 Practicum in the Instruction of the Young Exceptional Child (3)

A supervised field experience requiring a minimum of 75 clock hours of direct contact with young children with exceptionalities.

Prerequisite: EDFS 766.
EDFS 774 Language Development and Language Disorders (3)
A study of normal and abnormal development of speech and language. Includes disorders of speech characteristics of the mentally disabled, emotionally disabled, learning disabled, physically disabled and others. (summer)
Prerequisite: EDFS 710 and 654 or equivalent.
EDFS 782 Physical Education for Exceptional Children and Youth (3)

A course designed for general and special educators concerned with the physical education of exceptional children and youth. Includes procedures to use in inclusive settings as well as in special programs.
Prerequisite: EDFS 710.
EDFS 795 Independent Study in Special Education (1-6)
A course designed to offer advanced students an opportunity to pursue an in-depth study of a chosen topic in special education. Each student must develop a plan of study and file the completed study at the end of the semester.
Prerequisite: Permission of the instructor and department chair.

## EDFS 797 Clinical Practice in Special Education (9)

This course is designed to provide candidates with an extensive supervised field experience in teaching exceptional learners. Each candidate will be placed in a special education setting commensurate with his or her emphasis within special education for a minimum of 60 days ( 12 weeks). Weekly seminars also are required. (spring)

# Master of Education in Teaching Learning and Advocacy 

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## go.cofc.edu/medtla

## Program Description

The goals of the M.Ed. in Teaching, Learning and Advocacy (MTLA) are to advance the knowledge of professionals who are seeking to improve their effectiveness and to prepare them to serve as change agents in their classrooms, schools, and districts. The MTLA degree focuses on the needs of underachieving children, especially those who live in poverty. Through the core courses, the program provides a base for all candidates to better:

- understand and apply advanced theories that inform their teaching and work in diverse communities
- use and critique multiple forms of research and inquiry
- think systematically about their own practice, provide support for other professionals and communicate clearly with their students, other educators, and parents
- advocate for students and the profession
- understand the relationships among educational policies and practices, local context, and learners
Building from the core courses ( 21 credit hours), candidates choose an additional three (3) courses ( 9 credit hours) that focus on the instructional needs of diverse learners, and they complete the program of study with a capstone research project ( 3 credit hours). The core courses, the additional courses, and research project focus on developing a deep understanding of diverse children and youth and how the school, community, and societal context shape their engagement in learning and life. Additionally, the program explores teaching as both reflective practice and collaborative change making. It emphasizes using reflection and inquiry skills to improve practice and the profession.
The Teaching, Learning, and Advocacy M.Ed. program develops the skills, pedagogy and understanding of educators who either want to improve their own practice or who seek positions as teacher coaches, curriculum specialists, or lead teachers. In these roles, teachers are able to mentor and support colleagues who struggle to work effectively with children who are under-performing.


## Program Admissions Requirements

To be admitted to the degree program, an applicant is required to have a bachelor's degree or its equivalent with a GPA of 3.0 or higher in the education major or minor. The applicant must
also hold, or have held, initial teacher certification. Additional requirements include a $\$ 50$ nonrefundable application fee, official transcripts of all undergraduate and graduate coursework, a fully completed graduate school application (including three letters of recommendation which indicate evidence of potential for success in graduate work), and an applicant essay. Applicants must submit official Graduate Record Examination (GRE) scores or passing scores on the Praxis II or an equivalent state licensure test approved by the South Carolina Department of Education.

## Transfer Credit Policy

An applicant or student of the M.Ed. in Teaching, Learning and Advocacy (MTLA) program can seek approval from the Program Director to accept up to six transfer credit hours. These courses must have a grade of B or higher, and can count toward the M. Ed. in the MTLA degree requirements. Courses with a grade of "Pass" or "Satisfactory" will not be accepted. Also, note that the courses must be catalog courses and not professional development courses to count in a program. See description below for a description of the distinction between these courses.

## Professional Development and Catalog Courses

Certified educators can enroll in professional development courses through the School of Education, Health and Human Performance Office of Professional Development in Education (OPDE). These courses, known as Professional Development Courses (EDPD) are used to modernize instructional strategies and offer content enrichment opportunities while leading to recertification points and pay scale advancements. These professional development credits although offered through the College of Charleston and OPDE do not count toward the completion of an advanced degree such as the Master of Education or Master of Arts in Teaching. For more information regarding professional development courses, contact the OPDE Office at 843.953.7651.

Please note that EDPD courses differ from catalog courses. Courses that appear in the College of Charleston graduate catalog are considered catalog courses and have been approved as part of a course of study in a graduate-level program. These courses are typically offered at the downtown or north campuses. In some cases, schools or districts contract with the College of Charleston to offer catalog courses that can lead to M.A.T. or M.Ed. degrees or to certificates (i.e., English for Speakers of Other Languages, Special Education, Gifted and Talented Education).

## Degree Requirements

The M.Ed. in Teaching, Learning, and Advocacy is awarded to candidates who successfully complete an approved program of study consisting of 33 credit hours with a cumulative GPA of 3.0 including an approved 3 credit hour capstone project. At least 27 of the 33 hours must be taken at the College of Charleston.

## Core Courses (21 Credit Hours):

All candidates will complete 21 hours of core courses
MTLA 601 Class Race and Gender
MTLA 602 Critical Issues in Contemporary Education
MTLA 603 Family and Community Involvement

MTLA 607
EDFS 632
EDFS 635
EDFS 705

Teachers as Advocates for Children and Youth Learning, Cognition and Motivation Educational Research
Reflective Practice and Professional Development

## Options (9 Credit Hours):

Candidates will select one course from each of the three options:

Option One (Choose one)
MTLA 604 Identifying and Sustaining Effective Learning Communities
EDEE 667 Curriculum Theory and Application

Option Two (Choose one)
EDFS 672 Linguistic/Cultural Diversity in Education
EDFS 711 Differentiating Instruction to Meet the Needs of Diverse Learners

Option Three (Choose one)
MTLA 605 Literacy Development of Early Learners
EDEE 678 Success in Literacy for Older Readers

## Capstone (3 Credit Hours):

MTLA 702 Research and Development Project

## Assistantships

A number of graduate assistantships are available for full-time students. The awards are normally made by April 15 for the following academic year. Applications are available through The Graduate School.

## Teaching Learning and Advocacy Course Descriptions

## EDEE 667 Curriculum Theory and Application (3)

This course will expand the candidate's understanding of theories, issues, and practices of curriculum development. The course will examine the history of curriculum development in the United States and will identify educational, political, and social forces that have shaped curriculum. Students will identify reoccurring themes, major leaders in curriculum, and will gain an understanding of how curriculum is developed from the classroom to the national level. By examining their own understanding of curriculum, they will begin to conceptualize potential capstone projects.

## EDEE 678 Success in Literacy for Older Readers (3)

Examination of all processes involved in literacy, speaking, listening, reading, writing, viewing and thinking. Specifically, this course is designed to push your thinking to analyze critically how older learners, Grades 3-12, are and become "literate" in traditional and non-traditional educational settings. The course views literacy as a life-long process.

## EDFS 632 Education Psychology Learning, Cognition, and

 Motivation (3)Orientation to the psychology of learning and instruction, the development of theoretical models as well as empirical bases for making decisions. This course examines current research on human learning including advances in the study of learning as well as practical applications of what we know about advances in the study of learning as well as practical applications of what we know about learning on the design of curriculum, teaching, and assessment. The course covers important concepts and theories in educational, cognitive, and social psychology and offers the student opportunities to develop their teaching skills through application of the theories and concepts with attention to the realities of teaching. (spring)

## EDFS 635 Educational Research (3)

An in-depth study of methods used in different types of educational research. Includes involvement of the student in the process of educational research design, implementation, reporting, and evaluation. (fall, spring and summer)

## EDFS 672 Linguistic and Cultural Diversity in Education (3)

This course provides pre-K-12 educators with an understanding of issues affecting linguistically and culturally diverse learners. Topics include analysis of language and its development in diverse settings, history of bilingual education, cultural/learning style preferences, cultural influences in curriculum and materials, legal issues related to serving limited English proficient learners, ESOL program development, and homeschool collaboration.

## EDFS 711 Differentiating Instruction to Meet the Needs of Diverse Learners (3)

This course is designed for general and special educators to meet the needs of students in inclusive classrooms (preK-12). Teachers learn how to differentiate instruction to meet the needs of students who are performing in ranges from gifted to significantly below average. This course provides strategies for all learners, and examines the over and under identification of racial and ethnic minorities in special and gifted education programs.

## EDFS 705 Reflective Practice and Professional Development (3)

This course, an intensive study of how professional frameworks guide educators' professional development, focuses on knowledge and skills linking ongoing reflective practice to improve pedagogy, student outcomes and professionalism. Educational research in the areas of portfolio assessment, teacher as researcher, and teacher as reflective practitioner is emphasized.

## MTLA 601 Class, Race and Gender in Education (3)

This course examines contemporary significance of race/ethnicity, class and gender on the educational experience. Drawing on history, sociology, anthropology, philosophy and public policy, it considers the way public educational institutions empower individuals while reproducing social inequalities. Candidates critically examine their own
educational experiences in relationship to class, race and gender.

Prerequisite: Admission to graduate program

## MTLA 602 Critical Issues in Contemporary Education (3)

This course explores issues impacting children and youth, comparing those from urban, suburban, and rural settings. It introduces candidates to critical theory as a lens through which they can evaluate current school policies and practices.
Prerequisite: Admission to graduate program.
MTLA 603 Family and Community Involvement (3)
This course is designed to help advanced level candidates better understand the benefits of school, family, and community involvement. Candidates, examine settings where this involvement positively impacts student learning, and design and implement a variety of involvement strategies.
Prerequisite: Admission to graduate program

## MTLA 604 Identifying and Sustaining Effective Learning Communities (3)

Candidates identify characteristics of effective learning communities. They explore and critique classroom environments, teacher philosophy, and pedagogy in relation to the students they teach. They create a plan to sustain such a community in their practice.
Prerequisite: Admission to graduate program
MTLA 605 Literacy Development of Early Learners (3)
This course extends students' understanding of the fundamentals of literacy, including reading, writing, listening, speaking, and viewing. As teachers of young children (PK3rd), students explore traditional and expanded notions of text. The course emphasizes the literacy process, factors affecting that process, and principles and skills involved in development of literacies.
Prerequisite: Admission to graduate program

## MTLA 606 Teacher as a Member of the Professional Community (3)

Candidates explore the role of teacher leadership in effecting change. They explore change theory and develop strategies needed to change agents at multiple levels, e.g., building on sound instructional practices, collaboration, teamwork, peer coaching, and mentoring. They learn to strengthen community and family partnerships and communicate across diverse spheres.

Prerequisite: Admission to graduate program Learning and Advocacy $\mid 77$

MTLA 607 Teachers as Advocates for Children and Youth (3)

This course explores the effect of policy on the lives and learning of children and youth. It turns this understanding toward advocating for better school and classroom experiences for children and youth. Candidates examine their own practice as well as policies and procedures through the lens of advocacy.

Prerequisite: Admission to graduate program

## MTLA 702 Research and Development Project (Capstone) (3)

An in-depth study of an individually chosen topic, which is planned and completed under the guidance of the student's advisor and submitted for review by the graduate faculty.

# Environmental Studies and Public Administration Dual Program 

Timothy Callahan<br>Program Director, Environmental Studies<br>843.953.2000<br>Jo Ann Ewalt<br>Program Director, Public Administration<br>843.953.6690

## Program Description

The Master of Science in Environmental Studies and the Master of Public Administration programs offer a dual degree program that allows students the ability to attain two master's degrees in three years rather than four. This program is aimed at preparing students for professional level positions in public organizations that address environmental issues.

## Program Missions

The Master of Environmental Studies (MES) program provides students with an appreciation of the interdisciplinary nature of environmental problems without sacrificing the training rigor of a specific academic discipline. The interdisciplinary emphasis is established through a carefully designed set of required courses that provide students with an understanding of environmental issues. The MES curriculum addresses these issues by teaching students the principles of scientific research, by giving students the tools to evaluate the potential environmental risks, and by helping students examine the role of public policy in environmental decision making.

The Master of Public Administration (MPA) mission is to prepare public service leaders. Upon graduation MPA students will have the ability to think critically and creatively about public issues, the dedication and capacity to serve a diverse community and the skills to enter a professional position in a public organization. To accomplish this mission, the MPA program provides the following:

- A rigorous core curriculum that examines the theoretical underpinnings of public service and provides concentrated areas of study in arts management, environmental policy, nonprofit management, and urban and regional planning;
- An environment that nurtures a commitment to service;
- Opportunities to support collaboration and the creation of partnerships among communities and public service organizations.


## Degree Requirements

To attain both the MES and MPA degree separately, students must complete at least 80 hours of coursework. The joint program allows students to earn both degrees with a minimum
of 56 hours rather than the 80 . Each student is required to complete a set of core courses, a series of approved electives and an internship or thesis.

## Core Curriculum

EVSS $601 \quad$ Economic Theory for Policy Analysis (3)

EVSS/PUBA 602 Public Policy (3)
EVSS $659 \quad$ Environmental Statistics (3) or
EVSS 624 Biometry (4)
EVSS 632 Social Science Methods for Environmental Studies (3)
EVSS $646 \quad$ Core Seminar (2)
EVSS 610 Environmental Biology (3) or
EVSS $631 \quad$ Pollution in the Environment (3) or
EVSS $640 \quad$ Earth Systems Science (3) or
EVSS 650 Energy Production Management (3)
PUBA $600 \quad$ Public Service Roles and Responsibilities (3)
PUBA 601 Research and Quantitative Methods for Public Administration (3)
PUBA 603 Managing Public Organizations (3)
PUBA 604 Managing Human Resources (3)
PUBA 605 Managing Financial Resources (3)
PUBA $701 \quad$ Capstone Seminar (3)
EVSS/PUBA Internship/Thesis (6)
Total core - minimum 41, 42, or 43 hours
The student then selects a minimum of 5 elective courses from either program and approved by their advisor.

Internship/Thesis: each student conducts one project ( 6 credit hours) that consists of public administration and environmental studies aspects as directed by an advisory committee of four faculty members (for thesis) or one external project supervisor and three faculty members for internship.

## Advising

An advisor will be assigned based on the student's program of interest. Students are expected to meet the standards of both programs as addressed in the Student Handbooks.

## Admission Requirements

Admission to the dual program requires a baccalaureate degree from an accredited institution. Applicants from any undergraduate discipline are encouraged to apply. Minimum requirements include:

- Overall undergraduate GPA of 3.0 (on a scale of 4.0)
- Scores from GRE tests taken prior to July 31, 2011 must have a composite score of 1100 on the combined verbal and quantitative sections and 4 on the writing assessment section. The minimum requirements for tests taken after July 31, 2011 require a minimum composite score of 305.
- Must have undergraduate coursework in biology (two courses with labs), chemistry (two courses with labs), statistics (one course) and American government (one course). One year of another physical or natural science may be substituted for either biology or chemistry
- Three letters of recommendation that specifically address the prospective student's academic qualifications and career potential in environmental studies and public administration.
- A statement of personal career goals to be achieved by the student applicant during his/her time in the program.

Admission decisions will be made by the admissions committees in both programs. When decisions are mixed or an applicant appeals, both program directors must agree to admit the applicant to the joint program. Students currently enrolled in either the MES or MPA program are eligible to apply to the joint program.

## Application Deadlines

Fall: March 1
Spring: November 1
No summer admissions

## Environmental Studies and Public Administration Core Course Descriptions

## EVSS 601 Economic Theory for Policy Analysis (3)

This course covers the application of microeconomic theories to the analysis of contemporary public sector issues, with an emphasis on environmental problems. Attention is given to the conceptual and practical problems associated with resource allocation decisions when there is conflict among efficiency, equity and limited information in policy making. The foundations of welfare economics and applications of costbenefit analysis as they relate to specific environmental policies and programs are examined as well.

## EVSS 602/PUBA 602 Public Policy (3)

This course seeks to develop a firm understanding of the public policy-making process in the United States. Students study policy making through various perspectives on implementation. The roles of major institutions including the executive, legislative and judicial branches of government, the bureaucracy and interest groups in this process are addressed. Includes various perspectives and interpretations of policymaking, including incrementalism, rationalism, pluralism and elitism. Selected areas of public policy, including transportation, poverty, energy and the environment are used to illustrate both the process and the different perspectives.

## EVSS 610 Environmental Biology (3)

This course emphasizes the application of fundamental toxicological and microbiological concepts to problems which exist in the real world. The course should prepare the student interested in environmental problems with the necessary practical information to make sound judgments in assessing meaningful solutions to existing environmental problems.

## EVSS 631 Pollution in the Environment (3)

Multidisciplinary study of fundamental physical, chemical, and biological processes that affect transport and fate of human-induced and natural pollutants in the environment.

This course is for students who have strong interests in environmental sciences, with basic preparation in sciences such as chemistry, geology, and/or biology.

## EVSS 632 Social Science Methods in Environmental Studies (3)

This course will introduce students to social science methodologies used to understand humans' relationships to the environment. The course will provide a basic understanding of the practice of collecting both quantitative and qualitative social science data, developing mixed-methods or interdisciplinary projects, and train students on how to interpret such data.

## EVSS 640 Earth Systems Science (3)

This course investigates the interactions among the atmosphere, ocean, ice, solid-Earth, and biological systems. Students study the evolution of solid Earth, the formation of the atmosphere and oceans, and the origin of life. Rate and scale of changes of the Earth's environment are examined through an analysis of changing climates. Finally, the course examines human evolution and technological development to gain an understanding of human impacts on the global environment.

## EVSS 641 Aqueous Geochemistry (4)

A quantitative study of equilibrium inorganic and organic geochemical reactions that control surface and groundwater composition. Geochemical modeling methods will be used to better understand the complex interactions between rock, sediment, and water. Lecture three hours per week; laboratory three hours per week.

## EVSS 646 Core Seminar (2)

This seminar course on environmental studies topics will offer a capstone review of the disciplines available to natural and policy scientists working on environmental related scholarship activities. Students will review recent scholarship with an emphasis on interdisciplinarity, providing them in their final year an environmental studies review. Pre/corequisites: All core courses.

## EVSS 650 Energy Production Management (3)

A study of the nature of energy and scientific issues relating to its production, storage, distribution, and use from a physics perspective. Production methods to be studied include: hydroelectric, fossil fuel, fission, fusion, wind, photovoltaic, biomass and solar-dynamic. Scientific issues will be related to the cultural and philosophical framework surrounding energy infrastructure and policy.

## EVSS 659 Environmental Statistics (3)

This course provides an introduction to environmental statistics and risk assessment. Topics include probability, correlation, regression, hypothesis testing, analysis of variance, model testing, residual analysis, and nonparametric models. Environmental applications will be provided throughout the course.

Prerequisites: Math 250: Statistical Methods I (or an equivalent college-level statistics course) or pass an entrance exam.

## EVSS 624 Biometry (4)

A broad treatment of statistics concentrating on specific statistical techniques used in biological research. Topics covered include sampling procedures and analysis of distributions (binomial, poison, and normal), hypothesis testing and estimation with emphasis on analysis of frequencies, regression and correlation. Several nonparametric and multivariate methods are also discussed. Emphasis is on application of statistical techniques and not theory; therefore knowledge of mathematics through calculus is expected.

## PUBA 600 Public Service Roles and Responsibilities (3)

This course explores the evolution and current status of the public sector in the United States. Students will study the ethical, legal, political, and professional dimensions of public service.

PUBA 601 Research and Quantitative Methods for Public Administration (3)

This course examines the various aspects of collecting and processing primary and secondary data utilized by public organizations for decision-making and program evaluation. Students will learn basic qualitative and quantitative methods for developing a valid research design, how to create and implement surveys, and basic statistical analysis techniques.

## PUBA 603 Managing Public Organizations (3)

This course provides students with an understanding of the challenges of managing public organizations. Topics of study include leadership, motivation, group behavior, culture, decision making, accountability and organizational change and development.

## PUBA 604 Managing Human Resources (3)

This course considers the context and practice of effective human resource management, with special emphasis on the political, legal, historical, and ethical dimensions of public employment. Students will apply personnel management theories and techniques to contemporary organizational challenges to investigate the tensions inherent to balancing competing values and demands.

## PUBA 605 Managing Financial Resources (3)

This course examines the organization and techniques of governmental financial management, budgetary theories and intergovernmental financial relations.

## PUBA 701 Capstone Seminar (3)

The capstone seminar is designed to be a culminating experience that helps the student integrate knowledge and skills acquired throughout the program. Students engage in applied research.
Prerequisite: Completion of all M.P.A. core courses and at least 30 semester hours or permission of the instructor or M.P.A. director.

## Graduate Certificates

## Arts Management Graduate Certificate

Scott Shanklin-Peterson<br>Program Director<br>843.953.8241<br>petersons@cofc.edu

## http://artsmgmt.cofc.edu/graduate-programs/index.php

## Program Description

The Graduate Certificate Program in Arts Management serves professionals currently working in arts management or related fields who desire to expand their knowledge and skills, but may not be able to enter a full graduate program. The program offers courses currently available in the Master of Public Administration Program with an emphasis on preparing arts managers to meet the ever-changing challenges placed on nonprofit cultural institutions.

## Minimum Admission Requirements

The admission* and enrollment policy for the Graduate Certificate in Arts Management requires the following:

- Baccalaureate degree.
- Undergraduate grade point average of 3.0 or better.
- Writing sample demonstrating an ability to perform literary analysis and conduct research and/or a portfolio of arts management related work samples.
- Letter of intent stating the applicant's reasons for applying to the program, areas of interest and career objectives.
- Application to the Graduate School as an "Arts Management Certificate" Graduate Student.
* A separate degree-seeking application is required for admittance to a master's degree program at the College of Charleston; Admission to the certificate program does not imply acceptance to a master's program.


## Arts Management Graduate Certificate Program Requirements

The Graduate Certificate Program in Arts Management requires a minimum of twelve (12) hours of graduate coursework selected from the following courses, including at least two (2) required classes and at least two (2) certificate electives.

## Required Classes:

PUBA 660 Contemporary Perspectives on Arts Management (3)
PUBA 661 Advanced Arts Management (3)

## Electives:

PUBA 656 Fundraising and Marketing for Nonprofits (3)
PUBA 662
Cultural Administration and Applied Research at Avery (3)
PUBA 663 Technology and the Arts (3)
PUBA 664 Arts Education (3)
PUBA 710 Independent Research (3)
The following sequence represents the required courses and certificate electives of the Arts Management Certificate Program. Accepted students are expected to take two required classes (PUBA 660 and PUBA 661) and at least two certificate electives to complete the certificate program. The program may be completed in two years or less depending upon availability of courses. A sample two-year sequence follows:

## First Fall Semester:

PUBA 660 Contemporary Perspectives on Arts Management (3)

## First Spring Semester:

Electives chosen from two or more of the following:
PUBA 656 Fundraising and Marketing for Nonprofits (3)
PUBA 662 Cultural Administrations and Applied Research at Avery (3)
PUBA 663 Technology and the Arts (3)
PUBA 664 Arts Education (3)
PUBA 710 Independent Research (3)

## Second Fall/Spring:

PUBA 661 Advanced Arts Management (3)

## Certificate Transfer Policy

Up to 12 hours taken in the certificate program may be transferred into the Master of Public Administration (MPA) program with the approval of the program director. Students in the certificate program must still apply and be accepted into the MPA program before credit hours can be transferred.
MPA alumni interested in obtaining a certificate in Arts Management may use up to 12 hours taken in the MPA program towards their certificate program with the approval of the program directors of the MPA program and the Arts Management certificate program. Students must go through the admissions process and be accepted for the certificate program in order to be eligible to earn a certificate.
Students interested in earning both an MPA degree and a certificate are eligible to do so, but must complete a separate application for each program. Students earning the MPA degree and an Arts Management certificate are expected to complete an internship relevant to arts management.
Applications for the certificate program are reviewed by both the certificate's program director and the MPA program director.

## Course Descriptions

## PUBA 502 Special Topics in Public Affairs Seminars (1-3)

Covers current issues such as problem solving and public decisions; benefit-cost analysis; citizenship participation in public decision; and application of statistical techniques to public decisions. This course ranges from one to three credits.

## PUBA 656 Fundraising and Marketing for Nonprofits (3)

This course examines the development cycle and how nonprofits structure their giving and marketing programs. In addition to annual, major, and planned giving, the class will look at capital campaigns, the roles of boards and volunteers, grant writing, corporate and foundation giving, using technology and ethics and accountability.

## PUBA 660 Contemporary Perspectives on Arts Management (3)

This course will focus on the role of non-profit arts and cultural institutions, and the artists and managers that lead them. By examining the rapid changes occurring in the performing and visual arts management field, as well as the humanities, and analyzing the impact of these changes within the public domain, the course also seeks to encourage interested students to pursue careers in this dynamic profession.

## PUBA 661 Advanced Arts Management (3)

This course will involve students in the examination, analysis and involvement in applied experiences with non-profit arts and cultural organizations. Students will produce case studies in a variety of topical areas in arts administration that examine the resources, leadership, collaboration, skills, critical issues and practices of managers of select non-profit arts and cultural organizations in Charleston and the Tri-County region. (Prereq: PUBA 660 and six hours selected from PUBA 662, PUBA 663, PUBA 664 or PUBA 656 or permission of the professor. This course is intended to be the last course in the series of 12 required hours.)

PUBA 662 Cultural Administration and Applied Research At the Avery (3)
This course is the first course of its kind that uses the Avery Research Center for African American History and Culture as a laboratory to expose the students to what the Center does to serve the needs of a diverse market and constituency base. Through practical and service learning experiences, students will examine issues germane to public administration and education, arts administration, and cultural management.

## PUBA 663 Arts and Technology (3)

Artists have always experimented with emerging technologies, but in recent decades the field of Arts \& Technology has emerged as a dynamic and historically significant artistic practice. Discover the opportunities new technologies offer to arts managers; initiatives at the convergence of art and technology and the impact of technology and the arts on culture. Examine and conceptualize the themes of new media, sound art, moving images, the media artist, cyber culture and intellectual property issues.

## PUBA 664 Arts Education (3)

This course will examine current trends in arts education. Dealing primarily from an administrative viewpoint, the course will focus on government funding (local, state, and national), arts education organizations, specific pilot programs, and individual teaching situations. Although developed initially for the administrator, the course should prove equally valuable to the educator.

# English to Speakers of Other Languages Graduate Certificates 

Angela Crespo Cozart, Ph.D. Certificates Director<br>843-953-6353<br>cozarta@cofc.edu

## http://teachered.cofc.edu/grad-progs/esol-cert.php

## Certificates Description

The goal of the ESOL Certificates is to train individuals to teach English to non-native English speakers. Individuals who complete both Certificates will more than meet South Carolina Department of Education requirements for endorsement to teach in public schools. These Certificates will attract both practicing teachers as well as individuals who want to work in other arenas, such as non-profit organizations, businesses, or those who expect to work/teach abroad; for such individuals, these Certificates will constitute evidence of a body of knowledge in the field of ESOL.
Completion of Certificate I will form a solid foundation for beginning ESOL teachers, whether they will be teaching in public or private schools, working as volunteers with children and/or adults or working within the business sector. For teachers who have already taken ESOL courses provided by the state, or who have taken the four courses outlined in Certificate I, the courses included in Certificate II will help them complete the hours they need for endorsement.

Courses offered in both Certificates are designed to give students a strong underpinning in the theories and methodologies necessary for teaching ESOL. Approximately $90 \%$ of the coursework is completed online.

## Certificates Admission Requirements

- Application to the Graduate School as an ESOL Certificate Graduate Applicant.
- Certificate II applicants must have completed Certificate I courses or have permission of the director.
- Official transcripts from all institutions attended, including documentation of graduation from an accredited four-year college or university.
- Undergraduate GPA of 2.5 or higher.


## Endorsement Requirements

To receive add-on endorsement from the South Carolina Department of Education and to be able to teach in K-12 public schools, candidates must already have initial teaching certificate/licensure and one of the following:

- Six semester hours in courses in a single second language; or
- Completion of intensive language training by the Peace Corps, the Foreign Service Institute or the Defense Language Institute; or
- Placement in a third-year level course in the foreign language department at an accredited college or university; or
- Demonstration of second language proficiency (in a language that is unavailable at accredited institutions) through verification in writing from an official designated by the State Department of Education.

For more information on ESOL add-on endorsement/certification, go to http://ed.sc.gov/agency/programs-services/90/.

## Professional Development for Certified Teachers

Certified educators can enroll in professional development courses through the School of Education, Health, and Human Performance Office of Professional Development in Education (OPDE). These courses, known as professional development courses (EDPD) are used to modernize instructional strategies and offer content enrichment opportunities while leading to recertification points and pay scale advancements. These professional development credits offered through OPDE do not count toward the completion of an advanced degree such as the Master of Education or Master of Arts in Teaching. For more information regarding professional development courses, contact the OPDE Office at 843.953.7651.

Please note that EDPD courses differ from catalog courses. A catalog course has been approved as part of a course of study in a College of Charleston graduate-level program. These courses are ones that are offered through a contract course arrangement and count towards a master's degree in a specific discipline area (i.e.: M.A.T. and M.Ed. programs). They are awarded graduate credit, reviewed, and accepted by the specific discipline/curriculum involved.

## English to Speakers of Other Languages Certificate I (Initial)

EDFS 670 Principles and Strategies for Teaching English to Speakers of Other Languages (K-12) (3)
EDFS 671 Teaching Reading and Writing to K-12 Speakers of Other Languages (3)
EDFS 672 Linguistic and Cultural Diversity in Education (3)

EDFS 673 Assessing Student Performance (3)

## English to Speakers of Other Languages Certificate II (Advanced)

EDFS 680 Teaching English through the Content Areas (or Content Modification for ESOL Students K12) (3)

EDFS 681 Second Language Acquisition for Teachers of Elementary and Secondary Learners (3)
EDFS 682 ESOL Curriculum Design and Materials Development for K-12 Students (3)
EDFS 683 English Grammar/Structure for ESOL Teachers
(3)

EDFS 684 ESOL/Talented and Gifted and Special Education Issues (3)
EDFS 704 Field Experience in the Instruction of English as a Second Language to Elementary and Secondary Learners

## English to Speakers of Other Languages Course Descriptions

## EDFS 670 Principles and Strategies for Teaching English

 to Speakers of Other Languages (ESOL) (K-12) (3)A survey course intended to provide pre-K through grade 12 educators with knowledge of the principles, underlying methodologies and techniques for promoting acquisition of a second language through academic content. The main focus is to demonstrate a variety of instructional strategies that can benefit all students in a multicultural classroom.

## EDFS 671 Teaching Reading and Writing to K-12 Speakers of Other Languages (3)

This course is intended to provide a theoretical foundation for the teaching of reading and writing English to limited English proficient (LEP) learners in $\mathrm{K}-12$ schools. Participants will learn about journal writing, reading/writing workshops, family literacy, writing for publication and writing in the content areas.

## EDFS 672 Linguistic and Cultural Diversity in Education (3)

This course provides pre-K-12 educators with an understanding of issues affecting linguistically and culturally diverse learners. Topics include analysis of language and its development in diverse settings, history of bilingual education, cultural/learning style preferences, cultural influences in curriculum and materials, legal issues related to serving limited English proficient learners, ESOL program development, and homeschool collaboration.

## EDFS 673 Assessing Student Performance (3)

This class will provide a theoretical foundation for gathering and analyzing the data necessary for effective assessment of instruction serving language minority learners. Students will learn to question what kinds of data are collected, why and how data are used and what kinds of data may be overlooked in the assessment process.

## EDFS 674 Linguistics for ESOL Teachers (3)

This course provides prospective and practicing teachers of English as a second or foreign language a broad understanding of the grammar of English and a foundation in general linguistics. The course provides a theoretical basis for selecting language teaching strategies. Differences in descriptive and prescriptive grammars and their roles in ESOL/EFL instruction are explored. Participants develop skills in linguistic analysis through exploring traditional, transformational, case, and discourse perspectives.

## EDFS 680 Teaching English Through the Content Areas (Or Content Modification for ESOL Students K-12) (3)

This course will focus on successful techniques for teaching both content and related academic language to all students. Students will learn how to make modifications for limited English proficiency students by using several techniques, including graphic organizers, scaffolded lessons, cooperative learning, alternative assessment and multicultural activities.

## EDFS 681 Second Language Acquisition for Teachers of Elementary and Secondary Learners (3)

This course will provide students with an opportunity to compare first and second language acquisition theories, such as the biological, learning, cognitive, behaviorist and interactionist theories. Students will also explore political, social and economic factors that impede or accelerate the learning of a second language.

## EDFS 682 ESOL Curriculum Design and Materials Development for K-12 Students (3)

This course will explore current trends in developing effective curriculum and materials for $\mathrm{K}-12$ students who are nonnative English speakers. Topics include instructional strategies and materials for content-area instruction and developing the four language components.

## EDFS 683 English Grammar/Structure for ESOL Teachers

 (3)This course will provide educators with an understanding of facts and generalizations about the English language and the resources to use for understanding ESOL/EFL instruction. Students will develop skills in linguistic analysis through exploring traditional, transformational, case and discourse perspectives.

## EDFS 684 ESOL/Talented and Gifted and Special Education Issues (3)

This course will explore ways of differentiating language and learning differences from disabilities. The following will be addressed: building learning communities for diverse learners, identifying gifted and talented non-native English speakers, deconstructing concepts of disability in society, family and school partnerships, special education and other ESOL issues.

EDFS 704 Practicum in the Instruction of English as a Second Language to Elementary and Secondary Learners (3)

This course includes 100 hours of supervised fieldwork and a weekly, one-hour seminar. Students will "shadow" an ESOL teacher and work towards jointly preparing and delivering classroom instruction.

# Gifted and Talented Education Graduate Certificate 

Julie Dingle Swanson<br>Program Director<br>843-953-5106<br>swansonj@cofc.edu

## http://teachered.cofc.edu/grad-progs/edgt-cert.php

The certificate in Gifted and Talented Education provides a specialized concentration of coursework for currently licensed educators seeking plus 18 credentials.

## Admissions Requirements

Admissions requirements for the Graduate Certificate in Gifted and Talented Education include:

1. Graduate School application
2. Current teaching certificate
3. College transcripts

All materials should be submitted by July 30.

## Transfer Credit Policy

Students may receive credit for taking equivalent coursework at the graduate level at other institutions within the past five years. In some cases coursework may transfer. Up to 6 hours of transfer credit may be applied to this certificate, from CEC/NAGC/NCATE accredited teacher education programs.

## Certificate Completion Requirements

Certificate completion requires 18 hours in the approved program of study with a minimum 3.0 GPA. Candidates are expected to complete the program within six years or less. Candidates who receive more than one grade below $\mathrm{C}+$ will be dismissed from the program. All academic policies of the Graduate School apply (as specified in the current catalog at the time of admission).

## Teacher Certification

The College of Charleston does not grant certification. Successful completion of the certificate provides the candidate with the gifted education coursework needed to be eligible to apply for the add-on certification from the Office of Teacher Certification, South Carolina Department of Education. Other graduate coursework for middle and secondary teachers may be necessary to obtain add-on certification from the South Carolina Department of Education.

## Graduate Certificate in Gifted and Talented Education Course Requirements

The certificate in Gifted and Talented Education is comprised of 18 hours, six courses, in graduate coursework, required for all levels (elementary, middle, and secondary).
Eighteen hours core in gifted and talented education courses required for all candidates (elementary, middle, and secondary):
EDFS 760 The Nature and Needs of Gifted and Talented Students: Historical, Philosophical, and Current Perspectives (3) Fall and Spring
EDFS 761 Introduction to Curriculum and Instruction for Gifted and Talented Students (3) Fall and Spring
EDFS 762 Field Experience in Curriculum and Instruction for Gifted and Talented Students (3) Spring
EDFS 763 Advanced Curriculum Practices for Gifted and Talented Students (3) Spring
EDFS 764 Social and Emotional Development of Gifted and Talented Students (3) Fall

EDFS 686 Special Topics: Current Trends and Issues in Gifted and Talented Education (3) Summer

## Gifted and Talented Education Course Descriptions

## EDFS 760: The Nature and Needs of Gifted and Talented Students: Historical, Philosophical, and Current Perspectives (3)

This survey course offers foundational knowledge through study of gifted education's historical and philosophical evolution, rationale as well as research, theory and practice of identification and program models. It focuses on gifted/talented youngsters' unique learning, behavioral characteristics, developmental patterns, and concomitant needs and issues, including special populations and accommodations.

## EDFS 761: Introduction to Curriculum and Instruction for Gifted and Talented Students (3)

This course introduces curriculum for gifted/talented students through exploration of models and instructional and assessment strategies matched to their educational needs and abilities. Current technology is employed in researching and designing curriculum which differentiates content, process/product and environment for gifted/talented learners following South Carolina Regulations for Gifted.

Prerequisite: EDFS 760: The Nature and Needs of Gifted and Talented Students: Historical, Philosophical, and Current Perspectives

EDFS 762: Field Experience in Curriculum and Instruction for Gifted and Talented Students (3)
In this course, students design curriculum, establish learner outcomes, plan instruction, and assess planned curriculum's
efficacy on student learning. Students work in field-related experiences to demonstrate competency in teaching gifted/talented learners for a minimum of 40 hours, implementing curriculum of their own design and assessing its effect on culturally and linguistically diverse gifted/talented students.

Prerequisite: EDFS 760: The Nature and Needs of Gifted and Talented Students: Historical, Philosophical, and Current Perspectives and EDFS 761: Introduction to Curriculum and Instruction for Gifted and Talented Students

## EDFS 763: Advanced Curriculum Practices for Gifted and

 Talented Students (3)This course explores previously introduced topics through indepth study of varied curricular and instructional models and their efficacy for this population. Students will develop competencies in creating challenging curriculum, individualizing for culturally and linguistically diverse learners, designing appropriate learning environments, and assessing student performance
Prerequisite: EDFS 760: The Nature and Needs of Gifted and Talented Students: Historical, Philosophical, and Current Perspectives and EDFS 761: Introduction to Curriculum and Instruction for Gifted and Talented Students

## EDFS 764: Social and Emotional Development of Gifted and Talented Students (3)

This course extends basics of gifted learners' nature and needs to in-depth study of theory and research on their social and emotional development and implications for guidance, counseling, and teaching. Students review research on affective characteristics, personality traits, family factors, special populations, and cultural and linguistic influences on student growth
Prerequisite: EDFS 760: The Nature and Needs of Gifted and Talented Students: Historical, Philosophical, and Current Perspectives and EDFS 761: Introduction to Curriculum and Instruction for Gifted and Talented Students

EDFS 686: Special Topics: Current Trends and Issues in Gifted and Talented Education (3)
In this course, students engage in in-depth examination of specific facets of gifted and talented education. This course includes topics such as special populations of gifted learners; current trends in identification and programming; underachievement and motivation of gifted and talented learners; and under-representation of culturally and linguistically diverse gifted students.

Prerequisite: EDFS 760: The Nature and Needs of Gifted and Talented Students: Historical, Philosophical, and Current Perspectives and EDFS 761: Introduction to Curriculum and Instruction for Gifted and Talented Students

# Operations Research Graduate Certificate 

Ben Cox<br>Program Director<br>843.953.5715<br>coxbl@cofc.edu

## http://math.cofc.edu/grad-progs/index.php

## Program Description

The graduate certificate program in Operations Research allows non-degree students to strengthen their expertise in operations research while recognizing them with an official certificate of their achievement. The program combines a solid theoretical foundation with a variety of applied tools and techniques to prepare the student to handle problems in business and industry.

## Certificate Requirements

The Operations Research graduate certificate requires a minimum of 15 hours of graduate coursework:

## MATH 502 Advanced Linear Algebra <br> MATH 551 Linear Programming and Optimization <br> MATH 552 Operations Research

The remaining graduate courses must be approved by the MS in Mathematics Steering COmmittee and will usually be chosen from the following list:

| MATH 530 | Mathematical Statistics I |
| :--- | :--- |
| MATH 531 | Mathematical Statistics II |
| MATH 550 | Linear Models |
| MATH 589 | Special Topics in Probability and Statistics |
| MATH 607 | Discrete Mathematics |

## Time Limit Requirements

All work credited toward the Graduate Certificate in Statistics must be completed within three years.

## Eligibility

- A minimum GPA of 3.0 in mathematics courses.
- Two letters of recommendation from former professors or immediate superiors in recent employment.
- Completion of an undergraduate calculus sequence up to and including multivariable calculus, linear algebra and an undergraduate statistics course. Students may be admitted provisionally if they have had all of the listed courses above but are lacking Linear Algebra. Their provisional status will be waived after they have completed this course with a grade of $B$ or better.
- An official copy of a transcript from each institution of higher learning attended, including documentation of a graduation from an accredited four year college or university.
Note: No transfer credit is permitted.


## Operations Research Graduate Certificate Course Descriptions

## CSCl 310 Advanced Algorithms (3)

A course that covers algorithms, focusing on computational complexity, approximation, classification, and optimization. Algorithms covered include evolutionary and genetic algorithms, gradient descent techniques, discrete optimization, branch-and-bound, dynamic and stochastic programming, combinatorial optimization and approximation algorithms.
Prerequisites: CSCI 230 and MATH 207.

## MATH 502 Advanced Linear Algebra (3)

This course provides the background in linear algebra needed for advanced work in algebra, analysis, and applications. Topics include vector spaces over a field, dual spaces, bilinear functions, linear transformations, determinants, eigenvalues, projections, diagonalization, Jordan canonical form and infinite dimensional spaces. Special topics such as applications to approximation theory, positive matrices, computation, multilinear algebra and spectral theory will be selected by the instructor.
Prerequisite: MATH 203 (Linear Algebra).
MATH 530 Mathematical Statistics I (3)
Topics include probability, probability functions, probability densities, mathematical expectation, sums of random variables and sampling distributions.
Prerequisite: MATH 221 (Calculus III). F
MATH 531 Mathematical Statistics II (3)
Topics include decision theory, estimation, hypothesis testing, regression, correlation and analysis of variance.

## Prerequisite: MATH 530. S

MATH 550 Linear Models (3)
This course provides an introduction to the theory of linear models for analyzing data. Topics include analysis of variance and regression models, as well as Bayesian estimation, hypothesis testing, multiple comparisons, and experimental design models. Additional topics such as balanced incomplete block designs, testing for lack of fit, testing for independence, and variance component estimation are also treated. The approach taken is based on projections, orthogonality, and other vector space concepts.
Prerequisites: Linear Algebra (MATH 203) and Statistical Methods (MATH 350) eF

## MATH 551 Linear Programming and Optimization (3)

This course is designed to provide first-year graduate students with an introduction to deterministic models in operations research. Topics include linear programming, network analysis, dynamic programming and game theory.
Prerequisite: MATH 221 (Calculus III), MATH 203 (Linear Algebra), and CSCI 220, or permission of the instructor. oF

## MATH 552 Operations Research (3)

This course is designed to provide first-year graduate students with an introduction to probabilistic models in operations research. Topics include nonlinear programming, queueing theory, Markov chains, simulation and integer programming.
Prerequisite: MATH 221 (Calculus III), MATH 530
(Mathematical Statistics I), CSCI 220, or permission of the instructor. eS

## MATH 589 Special Topics in Probability and Statistics (3)

This course is a one-semester introduction to an advanced topic in Probability and Statistics with generally only undergraduate mathematical prerequisites.
Prerequisites: TBA
Note: Since the course content is variable, it may be repeated for credit.

## MATH 607 Discrete Mathematics (3)

This course is an introduction to the theory and applications of discrete mathematics. Topics include enumeration techniques, combinatorial identities, matching theory, basic graph theory, combinatorial designs and related topics.

Prerequisite: MATH 203 (Linear Algebra).

# Special Education Graduate Certificate 

Angela Crespo Cozart<br>Certificate Director<br>843.953.6353<br>cozarta@cofc.edu

go.cofc.edu/specedcert

## Certificate Description

The Graduate Certificate in Special Education meets the needs of the currently licensed educator who wishes to add one or more areas of special education to an existing teaching credential. This certificate would also provide a specialized concentration of coursework for teachers seeking bachelor's plus 18 credentials.

The Graduate Certificate in Special Education is designed as a concentration of six courses typically required by the state of South Carolina for an add-on teaching credential in one or more areas of special education. The concentrations for this certificate include learning disabilities, emotional disabilities, and mental disabilities. General and special education teachers at all grade levels are eligible for admission to this certificate.
Each teacher's course of study is determined by the special education faculty advisor using the written results of the "file evaluation for adding a certificate area" from the South Carolina Office of Educator Certification and the teacher's professional goals.

## Admission Requirements

The admission* and enrollment policy for the Graduate Certificate in Special Education requires the following:

- Application to the Graduate School as a "Special Education Certificate" Graduate Student
- Statement of professional goals
- Copy of teaching certificate
- Graduate transcripts (if any). Contingent upon course approval, up to six hours of transfer credit may be applied from CEC/NCATE accredited institutions
*Admission to the certificate course of study does not require or guarantee any admission to other master's programs at the College of Charleston.


## Certificate Requirements

The Graduate Certificate in Special Education requires a minimum of eighteen (18) hours of graduate coursework selected from the following courses.
EDFS 710 Introduction to Exceptional Children and Youth (3) (fall)*
EDFS 720 Educational Assessment of Students with Disabilities (3) (spring)*
EDFS 724 Reading and Language Arts Instruction for Students with Disabilities (3) (fall)

EDFS 725 Classroom and Behavior Management (3) (spring \& summer)
*Course has field hours as part of course requirements.

## Characteristics Courses (Spring):

Choose one Characteristics course from the following:
EDFS 730 Characteristics of Individuals with Emotional Disabilities (3)
EDFS 740 Characteristics of Students with Learning Disabilities (3)
EDFS 750 Characteristics of Individuals with Mental Disabilities (3)

## Methods Courses (Fall):

Choose one Methods course from the following:
EDFS 731 Educational Procedures for Individuals with Emotional Disabilities (3)
EDFS 741 Educational Procedures for Students with Learning Disabilities (3)
EDFS 751 Educational Procedures for Individuals with Mental Disabilities (3)
Students completing this certificate are expected to maintain a 3.0 GPA and to finish the certificate requirements within six years. The other academic policies for graduate students documented in this catalog apply to certificate students.

## Certification Requirements

Students may substitute graduate-level electives in consultation with certificate faculty advisor and with approval of the certificate director. Teachers who need a practicum course for add-on certification should enroll in EDFS 748 Field Experience in the Instruction of Exceptional Children (3 credit hours for 75 field hours).
The South Carolina Office of Educator Certification also requires specific Praxis II exams, but those are not required for completion of this course of study. Special education faculty conduct regular review sessions for these exams.

Teachers must work directly with the Office of Educator Certification to facilitate their credential upgrades.

## Professional Development for Certified Teachers

Certified educators can enroll in professional development courses through the School of Education, Health, and Human Performance's Office of Professional Development in Education (OPDE). These courses, known as Professional Development Courses (EDPD) are used to modernize instructional strategies and offer content enrichment opportunities while leading to recertification points and pay scale advancements. These professional development credits offered through OPDE do not count toward the completion of an advanced degree such as the Master of Education or Master of Arts in Teaching. For more information regarding professional development courses, contact the OPDE office at 843.953.7651.

Please note that EDPD courses differ from catalog courses. A catalog course has been approved as part of a course of study in a College of Charleston graduate-level program. These courses are ones that are offered through a contract course arrangement and count towards a master's degree in a specific discipline area (i.e.: M.A.T. and M.Ed. programs). They are
awarded graduate credit, reviewed, and accepted by the specific discipline/curriculum involved.

## Special Education Course Descriptions

## EDFS 710 Introduction to Exceptional Children and Youth (3)

An introductory course designed for general and special educators. An interdisciplinary approach to the study of the learning and behavioral characteristics of exceptional children and youth. Includes causes, identification, educational and community programs and provisions. Observation required (10 hours). (fall and summer)

## EDFS 720 Educational Assessment of Students with Disabilities (3)

A study of the selection, administration, and interpretation of formal standardized educational measures. Includes the application of assessment information to individualized education programs for exceptional children and youth. Field hours are required. (spring)

Prerequisite: EDFS 710 or equivalent or permission of the instructor.

EDFS 724 Reading and Language Arts Instruction for Students with Disabilities (3)

This course is an in-depth study of research-based methodologies for reading and written expression assessment and instruction for $\mathrm{K}-12$ students with emotional, learning or mental disabilities. The course will focus on developmental, corrective and strategic approaches and requires students to demonstrate competence in planning individualized reading and written language programs. (fall)
Prerequisites: EDFS 710 or equivalent or permission of instructor; EDFS 714 or other introductory curriculum and instruction course.

## EDFS 725 Classroom and Behavior Management (3)

A study of a variety of management systems with focus on specific techniques and their application in the classroom. (spring and summer)

## EDFS 726 Advanced Classroom and Behavior Management (3)

A seminar designed for the in-depth study of applied behavior analysis and its application in academic settings. Techniques for data-based program modifications are applied to social and academic behavior of students. (summer)

Prerequisite: EDFS 725 or equivalent.

## EDFS 730 Characteristics of Individuals with Emotional Disabilities (3)

An in-depth study of the unique learning and behavioral characteristics of children and youth with emotional disabilities. Includes theory and practice related to identification and educational community programs and provisions for this exceptionality. (spring)

Prerequisite: EDFS 710 or equivalent or permission of the instructor.

## EDFS 731 Educational Procedures for Individuals with Emotional Disabilities (3)

An in-depth study of educational procedures used to teach children and youth with emotional disabilities. Includes teaching procedures, development and use of materials and individual and classroom management techniques. (fall)
Prerequisite: EDFS 730

## EDFS 740 Characteristics of Students with Learning Disabilities (3)

An in-depth study of the unique learning and behavioral characteristics of children and youth. Includes theory and practice related to identification and educational and community programs, and provisions for this exceptionality with learning disabilities. (spring)

Prerequisite: EDFS 710 or equivalent or permission of the instructor.

## EDFS 741 Educational Procedures for Students with Learning Disabilities (3)

An in-depth study of educational procedures used to teach children and youth with learning disabilities. Includes teaching procedures, development and use of materials. (fall)
Prerequisite: EDFS 740

## EDFS 750 Characteristics of Individuals with Mental Disabilities (3)

An in-depth study of the unique learning and behavioral characteristics of children and youth with mental disabilities. Includes theory and practice related to identification and educational and community programs, and provisions for this exceptionality. (spring)

Prerequisite: EDFS 710 or equivalent or permission of the instructor.

## EDFS 751 Educational Procedures for Individuals with Mental Disabilities (3)

An in-depth study of educational procedures used to teach children and youth with mental disabilities. Includes teaching procedures, development and use of materials, and classroom management techniques. (fall)
Prerequisite: EDFS 750.

# Statistics Graduate Certificate 

Ben Cox<br>Program Director<br>843.953.5715<br>coxbl@cofc.edu

## http://math.cofc.edu/grad-progs/index.php

## Program Description

The Graduate Certificate Program in Statistics allows nondegree students to strengthen their expertise in applied statistics while recognizing them with an official certificate of their achievement. The program combines a solid theoretical foundation with a variety of applied tools and techniques to prepare the student to handle statistical problems in business and industry.

## Certificate Requirements

The Graduate Certificate Program in Statistics requires a minimum of 15 hours of graduate coursework:

## MATH 530 Mathematical Statistics <br> MATH 531 Mathematical Statistics II <br> MATH 550 Linear Models

## Time Limit Requirements

All work credited toward the Graduate Certificate in Statistics must be completed within three years.

## Eligibility

- A minimum GPA of 3.0 in mathematics courses.
- Two letters of recommendation from former professors or immediate superiors in recent employment.
- Completion of an undergraduate calculus sequence up to and including multivariable calculus, linear algebra and an undergraduate statistics course. Students may be admitted provisionally if they have had all of the listed courses above but are lacking Linear Algebra. Their provisional status will be waived after they have completed this course with a grade of B or better.
- An official copy of a transcript from each institution of higher learning attended, including documentation of a graduation from an accredited four year college or university.
Note: No transfer credit is permitted.


## Statistics Course Descriptions

## MATH 530 Mathematical Statistics I (3)

Topics include probability, probability functions, probability densities, mathematical expectation, sums of random variables and sampling distributions.
Prerequisite: MATH 221 (Calculus III). F

## MATH 531 Mathematical Statistics II (3)

Topics include decision theory, estimation, hypothesis testing, regression, correlation and analysis of variance.

## Prerequisite: MATH 530. S

## MATH 540 Statistical Learning I (3)

Introduction to various approaches to statistical learning including empirical processes, classification and clustering, nonparametric density estimation and regression, model selection and adaptive procedures, bootstrapping and crossvalidation.

Prerequisites: MATH 203, MATH 220, and MATH 350.

## MATH 541 Statistical Learning II (3)

Neural networks, nearest neighbor procedures, Vapnik Chervonenkis dimension, support vector machines, structural risk minimization induction, regularization methods and boosting, and baggin in classification and regression.

Prerequisites: MATH 540.
MATH 550 Linear Models (3)
This course provides an introduction to the theory of linear models for analyzing data. Topics include analysis of variance and regression models, as well as Bayesian estimation, hypothesis testing, multiple comparisons, and experimental design models. Additional topics such as balanced incomplete block designs, testing for lack of fit, testing for independence, and variance component estimation are also treated. The approach taken is based on projections, orthogonality, and other vector space concepts. (eF)

Prerequisites: MATH 203 and MATH 350.

## MATH 555 Bayesian Statistical Methods

Posterior distributions using observed data are calculated and used for inferences about model parameters. Classical statistical methods are compared with the Bayesian methods and classical models such as linear regression, ANOVA, and generalized linear models are extended to include the Bayesian paradigm. Monte Carlo methods, Gibbs sampling and Metropolis-Hastings algorithms.

## Prerequisites: MATH 430 Mathematical Statistics I

## MATH 589 Special Topics in Probability and Statistics (3)

This course is a one-semester introduction to an advanced topic in Probability and Statistics with generally only undergraduate mathematical prerequisites.

Prerequisites: TBA
Note: Since the course content is variable, it may be repeated for credit.

## MATH 650 Statistical Quality Control (3)

This course is an introduction to basic methods of statistical process control. Topics include control charts, cumulative sum control charts, lot acceptance sampling plans and related topics.
Prerequisite: MATH 350 (Statistical Methods) or permission of the instructor. eSu

## MATH 651 Design of Experiments (3)

This course is an introduction to how and why scientific experiments should be designed. The most commonly used designs and their variations along with resulting analysis will be covered.

Prerequisite: MATH 350, or equivalent, or permission of the instructor.

# Urban and Regional Planning Graduate Certificate 

Kevin Keenan<br>Program Director<br>843.953.5679<br>keenank@cofc.edu

## http://puba.cofc.edu/academic-information/certificateprograms/index.php

## Program Description

The Graduate Certificate Program in Urban and Regional Planning provides advanced training in the skills and competencies required to address the multifaceted problems posed by rapid growth and development in the Lowcountry. Students obtaining the certificate in Urban and Regional Planning seek employment in government planning agencies, or in private consulting and/or real estate development. The certificate courses are offered through the Master in Public Administration Program, but successful completion of certificate courses does not include admission to the MPA program. Students who wish to apply to the MPA program should do so within the first six hours of certificate study.

## Minimum Admission Requirements

The admission and enrollment policy for the Graduate Certificate in Urban and Regional Planning requires the following:

- Baccalaureate Degree
- Undergraduate Grade Point Average of 3.0
- Application to The Graduate School as an "Urban and Regional Planning Certificate" student
- Official transcripts from all previously attended colleges and universities
- A statement of goals detailing the reasons for applying to the program, professional experience, academic skills, and career objectives
- Résumé
- Two (2) letters of recommendation
- Though not a requirement, applicants may submit a writing sample, such as an undergraduate thesis, a recent work project, professional presentation, etc.


## Program Requirements

The Graduate Certificate Program in Urban and Regional Planning requires the completion of twelve (12) credit hours of graduate coursework. Accepted students are required to complete PUBA 612 History and Theory of American Urban Planning, and select one elective from each sub-field of study: Policy and Management, Legal Issues, and Development Practice.

## Core Course

PUBA 612 History and Theory of American Urban Planning (required)

## Policy and Management (Complete 1 Course)

PUBA 611 Urban Policy
PUBA 620 Local Government Politics and Administration
Legal Issues (Complete 1 Course)
PUBA 613 Planning Law
PUBA 631 Administrative Law
PUBA 635 Land Use Law
Development Practice (Complete 1 Course)
PUBA 615 Theories of Urban and Regional Development
PUBA 616 Local and Regional Economic Development: Policy and Practice
PUBA 502 Applications in GIS (Geographic Information Systems)

## Transfer Policies

## Transfer Credit Policy

A student may request the approval from the program director to accept up to three transfer credit hours. This course, if approved, must have a grade of B or higher.

## Certificate Transfer

Up to 12 hours taken in the certificate program may be transferred into the Master of Public Administration (MPA) program with the approval of the MPA program director. Students in the certificate program must still apply and be accepted into the MPA program before credit hours can be transferred.

MPA alumni interested in obtaining a certificate in Urban and Regional Planning may use up to 12 hours taken in the MPA program towards their certificate program with the approval of the program directors of the MPA program and the Urban and Regional Planning Certificate program. Students must go through the admissions process and be accepted into the certificate program in order to be eligible to earn a certificate.

Students earning the MPA degree and an urban and regional planning certificate are expected to complete an internship relevant to urban and regional planning.

## Urban and Regional Planning Course Descriptions

## PUBA 502 Special Topics in Public Affairs Seminars (1-3)

Special topics courses cover current issues such as problem solving and public decisions; benefit-cost analysis; citizenship participation in public decisions; and application of statistical techniques to public decisions. This course can range from one to three credits.

## PUBA 611 Urban Policy (3)

This course will introduce students to the field of urban policy and will teach students to critically analyze policy debates that directly impact city life. The course traces the major ideological shifts in urban policy over the past century,
analyzes their historical and philosophical foundations and explores the relationship between urban change and policy formulation.

## PUBA 612 History and Theory of American Urban Planning

 (3)This course provides a critical evaluation of the field of planning. The class focuses on the origins and evolution of the discipline, tools of planning practice, and the interrelated planning elements of economic development, social justice and environmental protection.

## PUBA 613 Planning Law (3)

This course examines the application and administration of planning law at the local level. The tension between constitutionally protected rights and governmental regulation will be explored as it emerges in decisions regarding land use, environmental protection and growth management.

## PUBA 615 Urban and Regional Development (3)

This course is designed to provide the basic toolkit required to think critically and coherently about processes of urban and regional economic development. Major themes include the spatial distribution and location of economic activity, the concentration of economic activities, how globalization affects these processes and the impact of regional differences.

PUBA 616 Local and Regional Economic Development: Policy and Practice (3)

This course examines the forces that drive regional growth and change, and it assesses the policies and practices that are commonly used in pursuit of economic growth, including industrial targeting, incentives, and work force development.

PUBA 620 Local Government Politics and Administration (3)

This course examines the role of local government administrators as leaders and service providers. The course explores an understanding of local political environments and develops an understanding of what they mean in terms of democratic institutions and theory.

## PUBA 631 Administrative Law (3)

This course studies the legislative, adjudicatory and general policy-making powers of administrative agencies and regulatory commissions, and the scope of judicial review of administrative action. The course is directed primarily toward an analysis of the political nature of bureaucracy, and secondarily toward the procedural requirements for administrative policy-making.

## PUBA 635 Land Use Law (3)

This course examines zoning and land use control in the United States and incorporates illustrations and cases from South Carolina in particular. It focuses on enabling legislation for local governments, regulation, the process of development, eminent domain, contract and conditional zoning and enforcement and violation of land use regulations.

## The Graduate School of the College of Charleston

843-953-5614
gradschool.cofc.edu
gradstud@cofc.edu
Amy Thompson McCandless, Dean
David Owens, Associate Dean

## Graduate Certificate Programs

## Arts Management

http://artsmgmt.cofc.edu/graduateprograms/index.php
Ms. Shanklin-Peterson, 843.953.8241

## English to Speakers of Other Languages

http://teachered.cofc.edu/grad-progs/esolcert.php
Dr. Cozart, 843.953.6353

## Gifted and Talented

http://teachered.cofc.edu/grad-
progs/edgt-cert.php
Dr. Swanson, 843.953.5106

## Operations Research

http://math.cofc.edu/grad-progs/
Dr. Cox, 843.953.5715

## Special Education

http://teachered.cofc.edu/grad-
progs/edsp-cert.php
Dr. Cozart, 843.953.6353

## Statistics

http://math.cofc.edu/
Dr. Cox, 843.953.5715

## Urban and Regional Planning

http://puba.cofc.edu/academic-information/certificate-
programs/index.php
Dr. Keenan, 843.953.5679

## Graduate Degree Programs

## Accountancy

http://sb.cofc.edu/graduate/accountancy Dr. Daniels, 843.953.8041

## Business Administration

http://mba.cofc.edu
Dr. Kindley, 843.953.6565

## Communication

http://communication.cofc.edu/gradprograms/index.php
Dr. Ruth-McSwain, 843.953.5783
Computer \& Information Sciences
http://www.cs.cofc.edu/gradPrograms.ph p

Dr. McCauley, 843.953.3187

## Early Childhood Education

http://teachered.cofc.edu/grad-
progs/edec.php
Dr. Cozart, 843.953.6353

## Elementary Education

http://teachered.cofc.edu/grad-
progs/edel.php
Dr. Cozart, 843.953.6353

## English

http://english.cofc.edu/
Dr. Carens, 843.953.5658

## Environmental Studies

http://mes.cofc.edu
Dr. Callahan, 843.953.2002

## Historic Preservation

http://www.grad.clemson.edu/programs/ Historic-Preservation/
Dr. Hudgins, 843.937.9567

## History

http://history.cofc.edu/graduateprogram/index.php
Dr. Coy, 843.953.8273

## Languages

http://lcwa.cofc.edu/grad-
progs/index.php
Dr. Holman, 843.953.5459

## Marine Biology

http://www.cofc.edu/~marine/
Dr. Plante, 843.953.5459

## Mathematics

http://math.cofc.edu/grad-progs/
Dr. Cox, 843.953.5715

## Middle Grades

http://teachered.cofc.edu/gradprogs/edmg.php
Dr. Cozart, 843.953.6353

## Performing Arts

http://teachered.cofc.edu/gradprogs/edpa.php
Dr. Springer, 843.953.8048
Dr. Taylor, 843.953.8231

## Public Administration

http://puba.cofc.edu/
Dr. Ewalt, 843.953.6690

## Science \& Mathematics for Teachers

http://www.cofc.edu/~medsm/
Dr. Veal, 843.953.5734

## Special Education

http://teachered.cofc.edu/grad-
progs/edsp.php
Dr. Cozart, 843.953.6353
Teaching, Learning and Advocacy
http://teachered.cofc.edu/grad-
progs/mtla.php
Dr. Finnan, 843.953.4826

# Accountancy Program 

BRADLEY-MCKEE, Linda J., Associate
Professor of Accounting, Ph.D., University of
North Texas
CARDUFF, Kevin, Assistant Professor of Accounting, Ph.D., Case Western Reserve University

DANIELS, Roger B., Director and Professor of Accounting, Ph.D., University of Mississippi

DELAURELL, Roxane, Associate Professor of Legal Studies, L.L.M., George Washington University, Ph.D., University of Texas-Dallas
GRANT, Gerry, Assistant Professor of Accounting, Ph.D., University of Mississippi
HARRIS, Daniel, Assistant Professor of Accounting, Ph.D., University of Mississippi

HOGAN, Robert, Assistant Professor of Accounting, Ph.D., Louisiana State University

KOPROWSKI, William, Professor of Legal Studies, Ph.D., Temple University; J.D., University of South Carolina
PERSSON, Martin, Assistant Professor of Accounting, Ph.D., University of London

SCHWARTZ, Bill, Scholar in Residence, Ph.D., University of California, Los Angeles

YOST, Jeffrey, Associate Professor of Accounting, Ph.D., The Ohio State University

## Business Administration Program

BLOSE, Julia E., Ph.D., Associate Professor of Marketing (1999) B.S., Ph.D., Florida State University; M.A., University of West Florida
BRADLEY-MCKEE, Linda J. Ph.D., CPA, Associate Professor of Accounting (1993) B.X., University of Texas at Arlington; M.S. Texas Tech University; Ph.D., University of North Texas

DAVIS, Joshua M., Ph.D., Assistant Professor of Marketing and Supply Chain Management (2009) B.S., Missouri State University; Ph.D., University of South Carolina

EVANS, Jocelyn D., Ph.D., Professor of Finance (2005) B.S., Barat College; M.B.A., Washington University in Saint Louis; Ph.D., University of South Carolina

KENT, Thomas W., Ph.D., Professor of Management and Entrepreneurship (1999) B.A., Lebanon Valley College; M.A., St. Mary's University; M.S., Ph.D., Case Western Reserve University
KINDLEY, James T., Instructor of Marketing (2011) M.S. Illinois Institute of Technology; MBA Harvard University; B.S. Georgia Institute of Technology

LIU, Hao-Chen, Ph.D., Associate Professor of Finance (2007) B.S., M.A, Ph.D., University of Alabama

MACK, Rhonda Walker, Ph.D., Professor of Marketing (1994) B.A., M.B.A., Winthrop College; Ph.D., University of Georgia

MCLEOD, J. Brumby, Ph.D., Assistant Professor of Hospitality and Tourism Management (2010), B.A. University of Georgia; M.B.A., University of Montana; Ph.D., University of Nevada, Las Vegas
MUELLER, Rene, Ph.D., Professor of Marketing and Supply Chain Management (1996) B.A., M.B.A., University of North Carolina at Wilmington; Ph.D., De Montfort University, England
PAN, Bing, Ph.D., Associate Professor of Hospitality and Tourism Management (2005) B. Econ., M.A., Nanjing University; Ph.D., University of Illinois
PITTS, Robert E., Ph.D., Professor of Marketing and Supply Chain Management (2004) B.B.A., M.B.I.S., Georgia State University; Ph.D., University of South Carolina
PYLES, Mark K., Ph.D., Associate Professor of Finance (2005) B.B.A., Eastern Kentucky
University; M.S., Ph.D., University of Kentucky
SHOCKLEY, Jeff, Ph.D., Assistant Professor of Supply Chain Managements (2012) B.S., University of Richmond, M.B.A, University of Arizona, Ph.D., Clemson University.

SMITH, Wayne W., Ph.D., Associate Professor of Hospitality and Tourism Management (2006) B.R.L.S., M.A., University of Waterloo; Ph.D., Wilfrid Laurier University

WITTE, Mark, Ph.D., Associate Professor of Economics (2007) B.S., University of Nebraska; Ph.D., University of North Carolina at Chapel Hill

## Communication Program

BENIGNI, Vincent, Associate Professor, Ph.D., University of Georgia. (CofC)
CHERRY, Lynn, Associate Professor, Ph.D., Louisiana State University. (CofC)
DAVIS, Julie, Associate Professor, Ph.D., University of Kansas. (CofC)

DEHAAN, Kathleen, Associate Professor, Ph.D., Northwestern University. (CofC)

FERGUSON, Douglas, Professor, Ph.D., Bowling Green State University. (CofC)

FERRARA, Merissa, Associate Professor, Ph.D., Michigan State University. (CofC)

GOODIER, Bethany, Associate Professor, Ph.D., University of South Florida. (CofC)

HEENEY, Tom, Associate Professor, Ph.D., University of Southern California. (CofC)
KOPFMAN, Jenifer, Associate Professor, Ph.D., Michigan State University. (CofC)
LACROIX, Celeste, Professor, Ph.D., Ohio University. (CofC)
LEE, Michael, Assistant Professor, Ph.D., University of Minnesota. (CofC)
LEE, Nam-Jin, Assistant Professor, Ph.D., University of Wisconsin (CofC)
MCGEE, Brian, Professor, Ph.D., The Ohio State University. (CofC)

MCGEE, Deborah Socha, Associate Professor, Ph.D., The Ohio State University. (CofC)
MILNER, Ryan, Assistant Professor, Ph.D., University of Kansas (CofC)

MOSCOWITZ, David, Assistant Professor, Ph.D., Indiana University. (CofC)

MOSCOWITZ, Leigh, Assistant Professor, Ph.D., Indiana University. (CofC)

PARISI, David, Assistant Professor, Ph.D., New York University. (CofC)

RUTH-MCSWAIN, Amanda, Associate Professor, Ph.D., University of Florida. (CofC)

STONE, Kirk, Associate Professor, Ph.D., American University. (CofC)

STRAUMAN, Elena, Associate Professor, Ph.D., University of South Florida. (CofC)

SUNDSTROM, Elizabeth, Assistant
Professor, Ph.D., University of Maryland (CofC)

WESTERFELHAUS, Robert, Associate
Professor, Ph.D., Ohio University. (CofC)

# Computer and Information Sciences Program 

ANDERSON, Paul E., Assistant Professor, Ph.D., Wright State University, Scientific computing, bioinformatics (CofC)

BANIK, Shankar M., Associate Professor, Ph.D., University of Oklahoma, Networking, collaborative applications (The Citadel)
BARES, William H., Assistant Professor, Ph.D., North Carolina State University, Intelligent user interfaces (CofC)
BOWRING, James F., Assistant Professor, Ph.D. Georgia Institute of Technology, Software engineering and architecture, statistical analysis of software systems (CofC)
DAVIS, Joshua M., Assistant Professor, Ph.D., University of South Carolina. IT Architecture Design \& Governance, Enterprise Systems Implementation, Organizational IT Competence (CofC)
JOSHI, Deepti, Assistant Professor, Ph.D., University of Nebraska, Database systems, data mining, geographic information systems (The Citadel)
LECLERC, Anthony P., Associate Professor, Ph.D., Ohio State University. Parallel algorithms (CofC)
MANARIS, Bill, Professor, Ph.D., University of Southwestern Louisiana. Human-computer interaction (CofC)
MCCAULEY, Renée, Professor, Ph.D., University of Louisiana at Lafayette. Programming \& formal languages, computational and complexity theory (CofC)
MOORE, John I., Jr., Professor, Ph.D., University of South Carolina. Graph theory, programming languages, e-commerce (The Citadel)
POTHERING, George J., Professor, Ph.D., University of Notre Dame. Databases (CofC)
RUDOLPH, George L., Assistant Professor, Ph.D., Brigham Young University, Neural Networks, A.I. robotics, software engineering (The Citadel)
STARR, Christopher W., Associate Professor, Ph.D., Medical University of South Carolina. Software design (CofC)
VERDICCHIO, Michael P., Assistant Professor, Ph.D., Arizona State University, Computational systems biology, bioinformatics (The Citadel)

## Education <br> Programs

ADAMS, Reid, Assistant Professor, Ph.D., University of North Carolina at Chapel Hill (CofC)
ASHWORTH, Kristen, Assistant Professor, Ph.D., University of Virginia (CofC)
BROCK, Laura L., Assistant Professor, Ph.D., University of Virginia (CofC)
BURKE, Quinn, Assistant Professor, Ed.D., University of Pennsylvania (CofC)
COZART, Angela C., Associate Professor, Ph.D., University of Tennessee (CofC)
CUDAHY, Diane, Associate Professor Emeritus, Ph.D., University of Tennessee (CofC)
DAVIS, Sarah M., Assistant Professor, Ph.D., University of Texas (CofC)
FINNAN, Christine, Professor, Ph.D., Stanford University (CofC)
FOWLER, Robert, Professor Emeritus, Ed.D., University of Florida (CofC)
GUTSHALL, Anne, Assistant Professor, Ph.D., University of South Carolina (CofC)
HAGOOD, Margaret, Associate Professor, Ph.D., University of Georgia (CofC)
HALE, Jon N., Assistant Professor, Ph.D., University of Illinois at Urbana-Champaign (CofC)
HARRIS, Rénard, Associate Professor, Ed.D., University of Tennessee (CofC)
HAY, Genevieve H., Associate Professor, Ph.D., University of South Carolina (CofC)
HUNTER-DONNIGER, Tracey, Assistant Professor, Ph.D., University of Wisconsin (CofC)
JARUSZEWICZ, Candace, Associate Professor, Ph.D., Kent State University (CofC)
JONES, Mary Blake, Professor, Ph.D., University of Connecticut (CofC)
KEYES, Denis W., Professor, Ph.D., University of New Mexico (CofC)
LANAHAN, Brian, Associate Professor, Ph.D., University of Florida (CofC)
LLOYD, Mary Beth, Assistant Professor, Ph.D., University of Virginia (CofC)
NABORS, Martha, Professor, Ph.D., Pennsylvania State University (CofC)
ndunda, mutindi, Associate Professor, Ph.D., University of British Columbia (CofC)

PERKINS, Robert F., Associate Chair, Associate Professor, Ed.D., West Virginia University (CofC)
SKINNER, Emily, Associate Professor, Ed.D., Columbia University Teachers College (CofC)
SKINNER, Michael E., Professor, Ph.D., The Ohio State University (CofC)
SPRINGER, Bonnie C., Associate Professor, Ph.D., University of Georgia (CofC)
SWANSON, Julie D., Associate Professor, Ph.D., University of South Carolina (CofC)
VAN SICKLE, Meta L., Chair, Professor, Ph.D., University of South Florida (CofC)
VEAL, William, Associate Professor, Ph.D., University of Georgia, Athens (CofC)
WELCH, Frances C., Professor, Ph.D., University of South Carolina (CofC)
WHITE, Kelley Mayer, Assistant Professor, Ph.D. University of North Carolina at Chapel Hill (CofC)

## English Program

ALLEN, David G., Professor, Ph.D., Duke University. Medieval British; English language; contemporary American poetry (The Citadel)
BIRRER, Doryjane Associate Professor, Ph.D., Washington State University. Contemporary British literature (CofC)
BOWERS, Terence N., Professor, Ph.D., University of Chicago. 18th-century British (CofC)
BRUNS, John, Associate Professor, Ph.D., University of Southern California. Film studies (CofC)
CARENS, Tim, Professor, Ph.D., New York University. Victorian literature (CofC)
DEVET, Bonnie D., Professor, Ph.D., University of South Carolina. Rhetoric and composition (CofC)
DUVALL, J. Michael, Associate Professor, Ph.D., University of Maryland. $19^{\text {th }}$ - and early- $20^{\text {th }}$ century American literature (CofC)
EICHELBERGER, Julia L., Professor, Ph.D., University of North Carolina at Chapel Hill. African American literature; Southern literature; contemporary American poetry (CofC)
FARRELL, Susan, Professor, Ph.D., University of Texas. Contemporary American literature; women's literature (CofC)

FRAME, E. Frances, Associate Professor, Ph.D., University of South Carolina. 19thcentury British literature; humanities and computing (The Citadel)

FRANCIS, Conseula, Associate Professor, Ph.D., University of Washington. African American literature (CofC)
FRAZIER, Valerie, Associate Professor, Ph.D., University of Georgia. African American literature (CofC)
HANSEN, Kathryn Assistant Professor. Ph.D., University of Southern California. Eighteenth Century British literature (The Citadel)
HENDRIKS, Licia M., Associate Professor, Ph.D., University of Michigan. African American literature (The Citadel)
HEUSTON, Sean, Associate Professor, Ph.D., Vanderbilt University. Modernist poetry (The Citadel)
HORAN, Thomas, Associate Professor, Ph.D., University of North Carolina. Modern British literature (The Citadel)
HUTCHISSON, James M., Professor, Ph.D., University of Delaware. 19th-century American literature (The Citadel)
KELLY, Joseph P., Professor, Ph.D., University of Texas. Modern British; Irish literature (CofC)
LEONARD, James S., Professor, Ph.D., Brown University. Literary criticism; 19thand 20th-century American literature (The Citadel)
LEWIS, Simon K., Professor, Ph.D., University of Florida. World literature (CofC)
LIVINGSTON, Michael, Associate
Professor, Ph.D., University of Rochester. Medieval literature (The Citadel)
LOTT, Bret, Professor, M.F.A., University of Massachusetts. Creative Writing (CofC)
LUCAS, Scott, Professor, Ph.D., Duke University. British Renaissance literature (The Citadel)
MECKLENBURG-FAENGER, Amy,
Associate Professor, Ph.D., The Ohio State
University. Composition (CofC)
PEEPLES, Scott, Professor, Ph.D., Louisiana
State University. American literature (CofC)
PIEPMEIER, Alison, Associate Professor, Ph.D., Vanderbilt University. 19th-century American women's writing; third wave feminism (CofC)
PILHUJ, Katherine, Assistant Professor, Ph.D., University of Miami. Early modern literature (The Citadel)

RHODES, Jack R., Professor, Ph.D., University of South Carolina. British romanticism and continental literature (The Citadel)
ROGERS, Kathy Beres. Assistant Professor., Ph. D., University of North Carolina at Chapel Hill. British Romanticism; literature and medicine; gender and body studies (CofC)
ROSKO, Emily, Assistant Professor, Ph.D., University of Missouri. Creative writing (CofC)
RULE-MAXWELL, Lauren. Assistant Professor. Ph.D., Emory University. American literature, Caribbean literature, contemporary women novelists, poetry, and composition (The Citadel)
RUSSELL, William, Assistant Professor. Ph.D., University of North Carolina at Chapel Hill. Renaissance literature (CofC)
SEAMAN, Myra, Professor, Ph.D., Claremont Graduate School. Medieval literature; history of the English language (CofC)
THOMAS, Catherine, Associate Professor, Ph.D., Pennsylvania State University. British Renaissance literature (CofC)
THOMPSON, Thomas C., Professor, Ph.D., Florida State University. Composition and rhetoric (The Citadel)
VARALLO, Anthony, Associate Professor, Ph.D., University of Missouri-Columbia. Creative writing (CofC)
WARD, Patricia H., Professor, Ph.D., University of North Carolina at Chapel Hill. Medieval literature; history of the English language (CofC)
WARNICK, Christopher, Associate Professor, Ph.D., University of Pittsburgh. Composition and rhetoric (CofC)

## Environmental Studies Program

Members of the environmental studies faculty come from a wide variety of disciplines and from a number of institutions. All have faculty status at The Graduate School of the College of Charleston.

## Environmental Studies Biology

BROWN, Joy, M.S., University of West Florida. Marine restoration (The Nature Conservancy)

DEGARADY, Colette, M.S., Southern Illinois University. Conservation ecology (The Nature Conservancy)
DELORENZO, Marie, Ph.D., Clemson University. Estuaries, microbial food web, pesticides, nutrients, mesocosms, South Florida (NOAA NOS)
DUSTAN, Phillip, Ph.D., SUNY Stony Brook, Caribbean reef-building corals and coastal hardbottom communities (CofC)
FARNHAM, Mark, Ph.D., University of Minnesota. Plant breeding and genetics, biodiversity, and integrated pest management (USDA Vegetable Laboratory)
GRAMLING, Joel, Ph.D. UNC Chapel Hill, Plant ecology (The Citadel)
GUSTAFSON, Danny, Ph.D., Southern Illinois University. Plant molecular ecology (The Citadel)
HILLENIUS, Willem, Ph.D., Oregon State University. Vertebrate paleobiology (CofC)
HITCHCOCK, Dan, Ph.D., University of Georgia. Ecological and environmental engineering (Clemson Univ.)
HUGHES, Melissa, Ph.D., Duke University. Communication, sexual selection, mating behavior and aggression in animals (CofC)
KILPATRICK, Eran, Ph.D., Clemson University. Herpetofauna, wetland ecology (USC-Salkehatchie)
LEVI, Amnon, Ph.D., Michigan State University. Plant genetics (USDA Vegetable Laboratory)
MAY, Harold, Ph.D., Virginia Tech. Environmental microbiology (MUSC)
MCELROY, Eric, Ph.D., Ohio University. Behavior, habitat, and locomotion in the wild (CofC)
MORRISON, Susan, Ph.D., Florida State University. Estuarine and marine microbiology (CofC)
MURREN, Courtney, Ph.D., University of Connecticut. How species exist and develop outside of their natural range (CofC)
NOLAN, Paul, Ph.D., Auburn University. Avian ecology; animal behavior, conservation biology (The Citadel)
PEDEN-ADAMS, Margie, Ph.D., Clemson University. Health effects of environmental contaminants, immunology, toxicology, endocrinology (MUSC)
PETERS, John, Ph.D., University of Northern Colorado, Science education; scientific literacy (CofC)
PRITCHARD, Seth, Ph.D., Auburn
University. Plant Physiology (CofC)

RAMSDELL, John, Ph.D., University of California, San Francisco. Cell biology, growth mechanisms, marine toxins (MUSC)
RUTTER, Matthew, Ph.D., Duke University. Evolutionary biology, genetics (CofC)
SANDERS, Felicia, M.S., Clemson
University, Coastal bird population research and management (SC DNR)
SCHOLTENS, Brian, Ph.D., University of Michigan. Plant-insect interactions and the faunistics and systematics of the Lepidoptera (CofC)

SHEDLOCK, Andrew, Ph.D., University of Washington, Plant Physiology (CofC)
SIMMONS, Alvin, Ph.D., University of Kentucky. Entomology, agricultural pest management (USDA Vegetable Laboratory)
SOTKA, Erik, Ph.D., UNC Chapel Hill. Ecology and evolution of marine biotic interactions, larval dispersal, molecular ecology, chemical ecology. (CofC)
SPENCE, Lundie, Ph.D., North Carolina State University. Water quality, constructed wetlands, non-point source pollution (SC Sea Grant Consortium)
STRAND, Allan, Ph.D., New Mexico State University. Plant evolutionary biology; demography; molecular ecology, conservation genetics (CofC)
THIES, Judy, Ph.D., University of Minnesota. Plant pathology; root-knot nematode resistance (USDA Vegetable Laboratory)
TRETTIN, Carl, Ph.D., North Carolina State University. Carbon and nutrient cycling in forested wetland landscapes, forest hydrology, and water quality (Center for Forested Wetlands)
TUFFORD, Dan, Ph.D., University of South Carolina. Water resources management, watershed ecology, wetland ecology (USCColumbia)
UPCHURCH, Saundra, M.S., University of Florida. Freshwater and estuary wetlands (SC DNR)
WELCH, Allison, Ph.D., University of Missouri. Evolutionary Biology and Behavioral Ecology: evolution of sexual displays and mating preferences; quantitative and ecological genetics; context-dependent sexual selection (CofC)
WHITEHEAD, Maria, Ph.D., Clemson University. Ornithology (The Nature Conservancy)
WISEMAN, D. Reid, Ph.D., Duke
University. Systematics and ecology or marine algae (CofC)

# Environmental Studies Chemistry 

CHOW, Alex, Ph.D., University of California Davis, Biogeochemistry (Clemson Univ.)

KINARD, Frank, Ph.D., University of South Carolina. Environmental chemistry (CofC)
GIACALONE, Katie, M.S. Rutgers
University, Watershed pollution monitoring and mitigation (Clemson Univ.)
REED, Lou Ann, Ph.D., MUSC.
Toxicokinetic/ pharmacokinetic studies of xenobiotics in aquatic species (NOAA Hollings Marine Lab)
SULLIVAN, Joann, Ph.D., University of South Carolina. Infrared and Raman spectroscopy. (MUSC)
WIRTH, Edward, Ph.D., University of South Carolina. Toxicological effect (particularly sublethal effects) and quantification of chemical contaminants in the environment (NOAA Hollings Marine Lab)

## Environmental Studies Economics

BLACKWELL, Calvin, Ph.D., University of New Mexico. Public goods (CofC)
HANSEN, David, Ph.D., University of Illinois. Entrepeurship, sustainable business (CofC)
RHODES, Ray, MBA, The Citadel, Economic theory for policy analysis (CofC)
SNYDER, Marcia, Ph.D., University College London, Environmental and resource economics (CofC)

## Environmental Studies Geology

ALI, Adem, Ph.D., Kent State University. Aquatic remote sensing, Water quality of the Great Lakes, Geostatistics (CofC)
AMATYA, Devendra, Ph.D., NC State University. Watershed planning (Center for Forested Wetlands)
BEUTEL, Erin, Ph.D., Northwestern University. Structural Geology and Tectonics (CofC)
CALLAHAN, Timothy, Ph.D., New Mexico Institute of Mining and Technology. Hydrogeology and water resources (CofC)
CAREW, James, Ph.D., University of Texas at Austin. Carbonate Petrology and Paleoecology (CofC)
CHADWICK, John, Ph.D., University of Florida, Geochemistry; remote sensing methods (CofC)

COLGAN, Mitchell, Ph.D., University of California, Santa Cruz. Climatology and environmental issues (CofC)
HARRIS, M. Scott, Ph.D., University of Delaware. Coastal Geology (CofC)
JAUME, Steven, Ph.D., Columbia University. Seismology and earthquake hazards (CofC)
LEVINE, Norm, Ph.D., Purdue University. Remote sensing, mineralogy, planetary geology (CofC)
NUSBAUM, Robert, Ph.D., University of Missouri- Rolla. Volcanology, remote sensing, mineralogy and planetary geology (CofC)
RUNYON, Cassandra, Ph.D., University of Hawaii. Planetary geology, geomorphology, volcanology, using remote sensing, GIS (CofC)
SAUTTER, Leslie, Ph.D., University of South Carolina. Marine geology, micropaleontology, and geological education (CofC)
VULAVA, Vijay, Ph.D., Swiss Federal Institute of Technology in Zurich. Dissolution, transport, and bioavailability of coal tar contaminants in surface and groundwater environments. (CofC)

## Environmental Studies Marine Biology

BURDETT-HART, Leslie, Ph.D., MUSC, Marine mammal health (NOAA Hollings Marine Lab)
BURNETT, Karen, Ph.D., University of South Carolina. Comparative immunology, environmental immunology (MUSC)
BURNETT, JR., Louis, Ph.D., University of South Carolina. Environmental animal physiology of marine organisms; respiration, ionic regulation, acid-base regulation (CofC)
COLLINS, Mark, Ph.D., University of Florida. Reef, coastal pelagic, estuarine and anadromous fishes. (SC DNR)
DE BURON-CONNORS, Isaure, Ph.D., Université des Sciences et Techniques. Parasites of brackish and marine water fishes: biology, life history, and histopathology (CofC)
DILLON, JR., Robert, Ph.D., University of Pennsylvania, Philadelphia. Genetics, evolution and ecology of mollusks (CofC)
DITULLIO, Giacomo, Ph.D., University of Hawaii. Marine phytoplankton ecology (CofC)
DUSTAN, Phillip, Ph.D., SUNY Stony Brook. Caribbean reef-building corals and coastal hardbottom communities (CofC)

FAIR, Patricia, Ph.D., Clemson University. Biochemistry of marine lipids, toxicology (NOAA NOS)
GALLOWAY, Sylvia, Ph.D., MUSC. Marine biomedicine, marine resource management (NOAA NOS)
HADLEY, Nancy, M.S., College of Charleston. Oyster reef studies; oyster restoration (SC DNR)

HAROLD, Antony, Ph.D., Memorial University of Newfoundland. Phylogenetic systematics, biogeography and life history of marine and freshwater fishes (CofC)
HYLAND, Jeffrey, Ph.D., University of Rhode Island. Marine benthic ecology, ecotoxicology, animal sediment pollution interactions, integrative assessments of coastal ecosystem health (MRRI)
KEY, Peter, Ph.D., University of South Carolina. Aquatic toxicology of insecticides (NOAA NOS)

MCFEE, Wayne, M.S., Northeastern University. Marine mammalogy. (NOAA NOS)
MOORE, Janet, Ph.D., Mississippi State University. Microbiology; ecotoxicology. (NOAA NOS)
OLMI, Geno, Ph.D., William and Mary. Estuarine and coastal ecology and management. (NOAA Coastal Services Center)
OWENS, David, Ph.D., University of Arizona. The physiology, behavior and ecology of marine vertebrates with special interest in the reproductive biology of marine turtles and diamondback terrapins (CofC)
PLANTE, Craig, Ph.D., University of
Washington. Benthic ecology; the influence of animal-microbe interactions on biogeochemical processes, microbial ecology, and the evolution of invertebrate-microbe associations (CofC)
SANCHO, Gorka, Ph.D., Woods Hole Oceanographic Institution / Massachusetts Institute of Technology Joint Program in Oceanography. Fish behavioral ecology and fisheries conservation (CofC)
SANDIFER, Paul, Ph.D., University of Virginia. Coastal issues; Marine policy and management (NOAA)
SANGER, Denise, Ph.D., University of South Carolina. Ecotoxicology. (SC DNR)
SCOTT, Geoffrey, Ph.D., University of South Carolina. Ecotoxicology. (NOAA NOS)
SHERVETTE, Virginia, Ph.D., University of South Carolina. Fishery habitat (Clemson)
SIEWICKI, Tom, Ph.D., University of South Carolina, Estuarine health (NOAA NOS)

SOTKA, Erc, Ph.D., University of North Carolina, Marine ecology and evolution (CofC)
VAN DOLAH, Robert, Ph.D., University of Maryland. Benthic ecology, toxicology, environmental assessment (SC DNR)
WENNER, Elizabeth, Ph.D., College of William and Mary. Marine ecology, crustacean biology (SC DNR)
WHITAKER, David, M.S., University of Charleston, S.C. Crustacean fisheries resource research (SC DNR)
WILBER, Pace, Ph.D. Florida State University. Ecology; GIS (NOAA NOS)
ZOLMAN, Eric, M.S., University of Charleston, S.C. Marine mammals (NOAA NOS)

## Environmental Studies Mathematics

ANGUELOVA, Iana, Ph.D., University of Illinois at Urbana-Champaign, Mathematical physics (CofC)
CALINI, Annalisa, Ph.D., University of Arizona. Integrable PDEs and dynamical systems (CofC)
HARRISON, Gary, Ph.D., Michigan State University. Mathematical modeling of ecological and environmental systems (CofC)
JONES, Martin, Ph.D., Georgia Institute of Technology. Stochastic processes, optimal stopping theory, extreme value theory, bandit processes (CofC)
LI, Jiexjang, Ph.D., Indiana University, Nonparametric and parametric estimation (CofC)
YOUNG, James, Ph.D., University of California, Berkeley. Stochastic processes and dynamical systems (CofC)

## Environmental Studies Philosophy

HETTINGER, Ned, Ph.D., University of Colorado at Boulder. Environmental philosophy; ethics, social and political philosophy (CofC)

## Environmental Studies Physics

HAKKILA, Jon, Ph.D., New Mexico State University. Gamma-ray bursts, peculiar abundance stars and multi-wavelength observational astronomy (CofC)
KUTHIRUMMAL, Narayanan, Ph.D,
Banaras Hindu University, Nanoscience and technology (CofC)

LINDNER, Lee, Ph.D., University of Colorado, Boulder. Meteorology (CofC)
NEFF, James, Ph.D., University of Colorado. Solar and stellar physics; magnetospheric and atmospheric physics; energy production and policy (CofC)
RICHARDSON, T.R. Ed.S., George Peabody College for Teachers. Light pollution (CofC)
RYAN, Michael, Ph.D., Georgia Institute of Technology. Occupational radiation dosimetry, radiological and environmental health physics and radiation protection (MUSC)
WRAGG, Jeff, Ph.D., University of Missouri- Columbia. Physics (CofC)

## Environmental Studies Political Science

BOYLES, JR., Robert, M.S., University of Delaware. Marine policy (SC DNR)
CALLICOTT, Burton, M.S., University of South Carolina. Recycling practice and policy (CofC)

DEVOE, Rick, M.M.A., University of Rhode Island. Coastal and marine policy (SC Sea Grant Consortium)
EWALT, Jo Ann, Ph.D., University of Kentucky. Public policy (CofC)
FISHER, P. Brian, Ph.D., University of California Irvine. International relations; environmental law and policy (CofC)
HALFACRE, Angela, Ph.D., University of Florida. Environmental and regulatory policymaking (Furman Univ.)
JOS, Phillip, Ph.D., University of South Carolina. Problem definition and political power (CofC)
KEENAN, Kevin, Ph.D., Clark University. Urban Geography, Terrorism, Qualitative Research Methods (CofC)
KNOTTS, Gibbs, Ph.D., Emory University. Political participation; public administration (CofC)
LIU, Guoli, Ph.D., SUNY Buffalo.
International politics (CofC)
MILLS, Lindeke, J.D., Georgetown
University. Environmental law and regulatory policy (CofC)

RECKSIEK, Heidi, M.E.M., M.P.P., Duke University. Coastal management and Marine Protected Areas (NOAA)
STEWART, Kendra, Ph.D., University of South Carolina (CofC)

TURNER, April, M.A., Clemson University. Coastal resources management and policy (SC Sea Grant Consortium)

WATSON, Annette, Ph.D., University of Minnesota. Human environmental geography (CofC)
WHITEHEAD, Jessica, Ph.D., The Pennsylvania State University. Human dimensions of global environmental change (SC Sea Grant Consortium)

## Environmental Studies Sociology

AURIFFEILLE, Deborah McCarthy, Ph.D., Northeastern University. Interconnections between social, economic, environmental, and public decision making issues (CofC)
BURKETT, Tracy, Ph.D., University of South Carolina. Research methods, political sociology, network analysis (CofC)
DILLARD, Maria, M.A., East Carolina University. Social-Ecological Systems, Resilience, Environmental Sociology, Public Health, Social Movements and Collective Action (Hollings Marine Laboratory)
ELLIS, Christopher, Ph.D., East Carolina University. Human dimensions of coastal resource management, survey design and implementation (NOAA Coastal Services Center)
FISH, Tom, Ph.D., University of Minnesota. Social ecology: ecotourism (US Fish and Wildlife Service)
LOVELACE, Susah, Ph.D., East Carolina University. Environmental social science (NOAA-NOS)
RASHFORD, John, Ph.D., City University of New York. Cultural Anthropology, Ethnobotany (CofC)

## Historic <br> Preservation <br> Program

FORD, Frances H., M.S., University of Pennsylvania, Historic Preservation and Conservation (Clemson University)
HUDGINS, Carter L., Ph.D., College of William \& Mary, Early American History (Clemson University)
MULDROW, Ralph, M.Arch./M.S., University of Pennsylvania., Architectural History and conservation (CofC)
STIEFEL, Barry, Ph.D., Tulane University, Historic Preservation (CofC)
WARD, James L., M.L.A., University of Georgia (CofC)

## History Program

BARRETT, Michael B., Associate Professor, Ph.D., University of Massachusetts. Modern Germany; Europe (The Citadel)
BISHOP, Jane C., Associate Professor, Ph.D., Columbia University. Ancient; Medieval; Byzantine (The Citadel)
BODEK, Richard H., Professor, Ph.D., University of Michigan. Modern Germany; European Social and Labor (CofC)

BOUCHER, Christophe Associate Professor, Ph.D., University of Kansas. Native American; American West; Atlantic World (CofC)
BOUGHAN, Kurt, Assistant Professor, Ph.D. University of Iowa. Early Modern Europe; Science and Medicine (The Citadel)
CARMICHAEL, Timothy, Associate Professor, Ph.D., Michigan State University. African; Islam in Africa (CofC)
COATES, Timothy J., Professor, Ph.D., University of Minnesota. Portugal and Portuguese Empire; Early Modern History; Colonial Latin America(CofC)

COVERT, Lisa, Assistant Professor, Ph.D., Yale University. Mexico; Modern Latin America (CofC)

COX, Marcus, Associate Professor, Ph.D., Northwestern. African-American (The Citadel)
COY, Jason, Associate Professor, Ph.D., University of California, Los Angeles. Early Modern Europe; Reformation Germany; Magic and Witchcraft (CofC)
DELAY, Cara, Associate Professor, Ph.D., Brandeis University. European Women's and Gender History; Modern Britain and Ireland (CofC)
DRAGO, Edmund L., Professor, Ph.D., University of California, Berkeley. Civil War and Reconstruction, the South (CofC)

GAO, Bei, Associate Professor, Ph.D., University of Virginia. Modern East Asia; China (CofC)
GIGOVA, Irina, Associate Professor, Ph.D., University of Illinois. Eastern Europe; Intellectual History (CofC)
GRENIER, Katherine H., Associate Professor, Ph.D., University of Virginia. Modern Europe; England (The Citadel)
INGRAM, Tammy, Assistant Professor, Ph.D., Yale University. U.S. South; Modern U.S. (CofC)

KNAPP, Keith, Associate Professor, Ph.D., University of California at Berkeley. China (The Citadel)
MCCANDLESS, Amy T., Professor and Dean, Ph.D., University of Wisconsin. England; Women's History (CofC)
MUSHAL, Amanda, Assistant Professor, Ph.D., College of William and Mary. US South (The Citadel)

NEULANDER, Joelle, Associate Professor, Ph.D., University of Iowa. Modern France; Modern Africa; Popular Culture (The Citadel)
OLEJNICZAK, William, Associate Professor, Ph.D., Duke University. European Social and Cultural; France (CofC)
PICCIONE, Peter A., Associate Professor, Ph.D., University of Chicago. Egypt; Ancient Near East (CofC)
POOLE, W. Scott, Associate Professor, Ph.D., University of Mississippi. South Carolina; American Religion (CofC)
POWERS, Jr., Bernard E., Professor, Ph.D., Northwestern University. African American; 19th-Century America (CofC)
PRESTON, David L., Associate Professor, Ph.D., College of William and Mary. American Colonial; Native American; Public (The Citadel)

RENOUARD, Joe, Assistant Professor, Ph.D., Emory University, Modern US; International Relations; Cold War (The Citadel)
SARR, Assan, Assistant Professor, Ph.D., Michigan State University. West Africa; Atlantic History (CofC)
SINISI, Kyle S., Professor, Ph.D., Kansas State University. Civil War; Gilded Age; American Political and Military (The Citadel)
SLATER, Sandra, Assistant Professor, Ph.D., University of Kentucky. Women and Gender; Early Modern Atlantic World; Colonial America (CofC)

STEERE-WILLIAMS, Jacob, Assistant Professor, Ph.D., University of Minnesota. British Empire; Modern Britain; Science, Health, and Disease (CofC)
TAYLOR, Kerry, Assistant Professor, Ph.D., University of North Carolina, Chapel Hill. Modern US; Labor History (The Citadel)
WRIGHT, Christopher, Assistant Professor, Ph.D., University of California, Santa Barbara. Middle East; Islam (The Citadel)

## Languages

AVENDAÑO, Nadia, Assistant Professor of Hispanic Studies, Ph.D., University of Arizona. (CofC)
CARRILLO-ARCINIEGA, Raul, Associate Professor of Hispanic Studies, Ph.D., University Tennessee. (CofC)
COLOMINA-GARRIGOS, Maria D., Associate Professor of Hispanic Studies, Ph.D., Michigan State University. (CofC)
COZART, Angela, Associate Professor of Teacher Education, Ph.D., University of Tennessee. (CofC)
HOLMAN, Robyn, Associate Professor of French, Ph.D., University of Colorado at Boulder. (CofC)

MOREIRA, Maria Luci DeBiaji, Associate Professor of Hispanic Studies, Ph.D., University of Illinois at Champaign-Urbana. (CofC)

MORRISON, Shawn, Associate Professor of French, Ph.D., Michigan State University. (CofC)
ndunda, mutindi, Associate Professor of Teacher Education, Ph.D., University of British Columbia. (CofC)
PERKINS, Robert, Associate Professor of Teacher Education, Ed.D., West Virginia University (CofC)
RODRIGUEZ-SABATER, Silvia, Assistant Professor of Hispanic Studies, Ph.D., Indiana University. (CofC)

SKINNER, Michael E., Associate Professor of Teacher Education, Ph.D., The Ohio State University.

WEYERS, Joseph, Professor of Hispanic Studies, Ph.D., University of New Mexico. (CofC)

## Marine Biology Program

ARNOTT, Steve Ph.D., University of Glasgow. Population dynamics of estuarine fish in South Carolina (SCDNR MRRI)

AYME-SOUTHGATE, Agnes J. Ph.D., University of Geneva - Geneva, Switzerland. The assembly and function of muscle cells using Drosophila melanogaster (fruitfly) as a model system; formation of the complex protein system known as the myofibril during development (CofC)

BALLENGER, Joseph C. Ph.D., Old
Dominion University. Fish life history and population dynamics; fish biology/ecology; fisheries science/management (SCDNR MRRI)

BECKER, Paul R. Ph.D., Texas A\&M
University. Transport and fate of contaminants in Arctic ecosystems; geographic and species-specific patterns of contaminants in mammals; biological and chemical factors affecting the transport of contaminants through food webs (Natl. Institute of Standards and Technology Charleston Laboratory)
BOYLAN, Shane D.V.M., North Carolina State. Aquatic animal health (SC Aquarium)
BROWDY, Craig L. Ph.D., Tel Aviv University. Shrimp reproduction and mariculture (Novus Intl.)

BURGE, Erin J. Ph.D., Virginia Institute of Marine Science, College of William and Mary. Environmental immunology and molecular biology of marine invertebrates and fishes (Coastal Carolina University)
BURNETT, Karen G. Ph.D., University of South Carolina. Marine biomedicine, immunology, molecular biology of marine organisms (Hollings Marine Laboratory)
BURNETT, Jr., Louis E. Ph.D., University of South Carolina. Environmental physiology, respiration and transport processes in animals (CofC)

BYRUM, Christine A. Ph.D., University of Texas at Austin. Evolution and development of endoderm and mesoderm in marine invertebrates; cell specification and signal transduction; cnidarian gastrulation. Use of the sea urchin as a developmental model at the cellular, molecular, and systems level; evolution of the metazoan body plan (CofC)
CHAPMAN, Robert W. Ph.D., University of Georgia. Fisheries, genetics, population biology (SCDNR, HML)
CHRISTOPHER, Steven J. Ph.D., Clemson University. Development and application of high accuracy analytical methodologies for the determination of trace element contaminants in marine biological matrices (NIST)
CHUNG, Katy W. M.S., University of Charleston. Aquatic toxicology (NOAA, National Ocean Service - Charleston Lab)
CLARK, Andrew J. Ph.D., University of California, Irvine. Form and function of musculoskeletal systems, biomechanics of hagfish feeding mechanics of biological materials (CofC)

COEN, Loren D. Ph.D., University of Maryland. Marine benthic ecology, plantanimal interactions, tropical ecology, crustacean biology (Florida Atlantic University)

COLLINS, Mark R. Ph.D., University of Florida. Fish biology and ecology, parasites of fishes (SCDNR MRRI)

CROWE, Stacie E. M.S., Nova Southeastern University. Benthic ecology, taxonomy of marine invertebrates (SCDNR Marine Resources Division)

DALY, Jaclyn, M.S., University of Queensland, Australia. Estuarine and marine resource management, regulatory and policy (NOAA/National Marine Fisheries Service)

DARDEN, Tanya L. Ph.D., University of Southern Mississippi. Fish population genetics (SCDNR, HML)

DAVIDSON, Margaret A. J.D., Louisiana State University, M.M.A., University of Rhode Island. Coastal resource management and research (NOAA Coastal Services Center)
DAY, Russell D. Ph.D., University of Pau. Mercury toxicology in sea turtles and seabirds (NIST)
DEBURON-CONNORS, Isaure Ph.D., Université des Sciences et Techniques du Languedoc. Host-parasite interactions at the ecological, cellular, and molecular levels (CofC)
DELORENZO, Marie E. Ph.D., Clemson University. Environmental toxicology (NOAA National Ocean Service)
DENSON, Michael R. Ph.D., Clemson University. Fisheries management, aquaculture, and stock enhancement (MRRI)
DEVOE, M. Richard M.A., City College of New York; M.M.A., University of Rhode Island. Aquaculture policy; marine/coastal policy and management; science management (S.C. Sea Grant Consortium)

DILLON, JR., Robert T. Ph.D., University of Pennsylvania. Biology of mollusks, genetics of gastropods and bivalves (CofC)
DITULLIO, Giacomo R. Ph.D., University of Hawaii. Phytoplankton physiology and ecology, biogeochemical cycling (CofC)
DOUCETTE, Gregory J. Ph.D., University of British Columbia, Vancouver. Physiological ecology of marine phytoplankton, marine biotoxins and harmful algae (NOAA/National Ocean Service, Charleston Lab)

DUSTAN, Phillip Ph.D., State University of New York at Stony Brook. Marine ecology, coral reef ecology, biological oceanography (CofC)

ETNOYER, Peter J. Ph.D., Texas A\&M, Corpus Christi. Deep-sea coral diversity and ecology (NOAA)
FAIR, Patricia A. Ph.D., Clemson University. Marine mammal health assessment and impacts of environmental stressors, toxicological effects of contaminants (Natl. Ocean Svc. - Charleston Lab)
FITZGIBBON, Wayne R. Ph.D., University of Newcastle, Shortland, N.S.W., Australia. Applying microphysiological techniques to the study of hormonal regulation of mammalian renal physiology and pathophysiology (MUSC)
FULTON, Michael H. Ph.D., University of South Carolina. Environmental health, aquatic toxicology (Natl. Ocean Svc. - Charleston Lab)
GALLOWAY, Sylvia B. Ph.D., Medical University of South Carolina. Coral health/disease characterization using genomic/proteomic approaches
(NOAA/NOS/NCOS)
GREENFIELD, Dianne I. Ph.D., Stony Brook University. Ecology and physiology of coastal phytoplankton (MRRI/Belle Baruch)
GREIG, Thomas W. Ph.D., University of South Carolina. Fisheries population genetics, molecular marine forensics, evolutionary ecotoxicology. (NOAA/Natl. Ocean Svc. Charleston Lab)
GUILLETTE, Louis Ph.D., University of Colorado. Reproductive/developmental endocrinology and ecotoxicology of vertebrates (MUSC)
GUSTAFSON, Danny J. Ph.D., Southern Illinois University. Plant conservation genetics and restoration ecology (The Citadel)
HADLEY, Nancy H. M.S., College of Charleston. Molluscan mariculture. (SCDNR Marine Resources Division)
HAROLD, Antony S. Ph.D., Memorial University of Newfoundland. Phylogenetic systematics and biogeography of fishes (CofC)
HILLENIUS, Willem J. Ph.D., Oregon State University. Comparative anatomy of tetrapods, particularly mammals, reptiles, and dinosaurs (CofC)
HUGHES, Melissa Ph.D., Duke University. Animal behavior; in particular, communication in song birds and crustaceans (CofC)
HYLAND, Jeffrey L. Ph.D., University of Rhode Island. Environmental monitoring and assessments, benthic ecology, ecotoxicology (NOAA/NCCOS/Natl. Ocean Svc. Charleston Lab)

JANECH, Michael G. Ph.D., Medical University of South Carolina. Physiology of marine organisms, molecular and proteomic applications (MUSC)
JUTTE, Pamela C. Ph.D., University of California, Berkeley. Benthic ecology; invertebrate behavioral biology
KELLER, Jennifer M. Ph.D., Duke University. Effects of environmental contaminants on marine wildlife health (NIST)
KEY, Peter B. Ph.D., University of South Carolina. Aquatic toxicology of insecticides (Natl. Ocean Svc. - Charleston Lab)
KINGSLEY-SMITH, Peter R. Ph.D. University College of North Wales. Ecology of oyster reef-associated finfish and invertebrate assemblages (SCDNR, MRRI)
KNOTT, David M.S., College of Charleston. Taxonomy and ecology of benthic and planktonic invertebrates from coastal and continental shelf habitats in the southeastern U.S; invasive and non-indigenous species (Poseidon Taxonomic Services, LLC)
KOHNO, Satomi Ph.D., Yokohoma City University. Environmental impacts on vertebrate endocrine and reproductive systems (MUSC)
KOREY, Christopher A. Ph.D., Harvard University. Drosophila genetics; Molecular genetics of human neurological disease using Drosophila as a model system (CofC)
KRACKER, Laura M. Ph.D., State University of New York at Buffalo. GIS and spatial analysis of fish distribution, species diversity, and aquatic habitats; landscape ecology methodologies for large lake and marine ecosystems; underwater acoustics and remote sensing; bioinformatics applied to coral health (NOAA/Natl. Ocean Svc. Charleston Lab)

KUCKLICK, John R. Ph.D., University of South Carolina. Analytical chemistry, aquatic toxicology (NIST)
LACY, Eric R. Ph.D., State University of New York at Buffalo. Biology of epithelial cells of osmoregulatory and digestive organs in fishes and mammals (MUSC)
LAZZARO, Mark D. Ph.D., University of California, Riverside. Cell biology: cytoskeletal function in pollen tube development; structure and function of plant secretory hairs including salt glands of marine plants; digital and fluorescent microscopy (CofC)

LEE, Peter A. Ph.D. Université du Québec à Rimouski. Sulfur biogeochemistry, climate change impacts on marine phytoplankton, algal community structure and biogenic sulfur production; application of flow cytometry and "-omics" technologies to phytoplankton ecophysiology and sulfur biogeochemistry (CofC)
LEFFLER, John W. Ph.D., University of Georgia. Seafood health and safety (SCDNR, MRRI)
LOVELACE, Susan Ph.D., East Carolina University. Interdisciplinary considerations of the linkages between coastal environmental health and ecosystem services and human health and human wellbeing.
(NOAA/NCCOS)
MAIER, Phillip P. M.S., College of Charleston. Natural resource inventory, recreational use of public lands, habitat restoration, invasive species (SCDNR)
MARTORE, Robert M. M.S., College of Charleston. Marine artificial reefs (SCDNR)
MAY, Lisa M.S., Austin Peay State University. Microbial ecology and coralmicrobe interactions, DNA damage and its effect upon the reproductive potential or coral, effects of stressors on coral health (NOAA/NOS)
MCELROY, Eric J. Ph.D., Ohio University. Evolution and ecology of animal performance and functional morphology; functional, physiological and morphological basis of animal behavior (CofC)
MCFEE, Wayne E. M.S., Northeastern University. Marine mammal strandings, marine mammal life history, dolphin/human interactions (NOAA/Natl. Ocean Svc. Charleston Lab)
MEYER-BERNSTEIN, Elizabeth Ph.D., State University of New York at Stony Brook. Physiological mechanisms underlying the circadian timing system using Drosophila and mouse model systems. Research includes studies at the molecular, cellular, system and behavioral levels (CofC)
MORRIS, Pamela J. Ph.D., Michigan State University. Environmental microbiology
MORRISON, Susan J. Ph.D., Florida State University. Ecology of estuarine and marine microbes (CofC)
MURREN, Courtney Ph.D., University of Connecticut. Plant ecology (CofC)
NAYLOR, Gavin Ph.D., University of Maryland. Molecular evolution, phylogenetics and comparative anatomy of chondrichthyan fishes (sharks, skates, and rays). Population genetics, bioinformatics, origin of novelty (CofC)

NEER, Julie A. Ph.D., Louisiana State University. Fisheries science and management, elasmobranch ecology, life history of fishes, population dynamics (SEDAR)
NOLAN, Paul Ph.D., Auburn University. Behavioral ecology and ornithology (The Citadel)
OWENS, David Wm. Ph.D., University of Arizona. Sea turtle behavior, physiology and ecology (CofC)
PEDEN-ADAMS, Margie M. Ph.D., Clemson University. Sub-lethal toxicological effects of environmental contaminants (UNLV)
PENNINGTON, Paul L. Ph.D., University of South Carolina. Marine and estuarine ecotoxicology (JHT Incorporated, NOAA)
PETERS, John S. Ph.D., University of Northern Colorado. Age and growth of fishes (CofC)
PLANTE, Craig J. Ph.D., University of Washington. Microbial ecology, benthic ecology, animal-microbe interactions, and the production and role of antimicrobials in marine bacteria (CofC)
PODOLSKY, Robert D. Ph.D., University of Washington. Functional biology and evolutionary ecology of marine invertebrates, larval ecology and life-history evolution, fertilization ecology, physiological ecology, phenotypic plasticity (CofC)
PRITCHARD, Seth Ph.D., Auburn
University. Plant physiological ecology: physiological responses of plants to ongoing global environmental changes including rising atmospheric carbon dioxide and ozone concentrations, warming, and soil salinization; implications for ecosystem function and food production (CofC)
REED, Lou Ann Ph.D., Medical University of South Carolina. Environmental chemistry, ecotoxicology (NOAA/NOS)
REICHERT, Marcel J.M. Ph.D., University of Groningen. Fish ecology, fisheries science (SCDNR, MRRI)
ROUMILLAT, William A. M.S., Old
Dominion University. Biology of fishes (SCDNR, MRRI)
RUTTER, Matt Ph.D., Duke University. Plant ecology, genetics and evolution (CofC)
SANCHO, Gorka Ph.D., Woods Hole Oceanographic Institution/Massachusetts Institute of Teachnology. Behavioral ecology of fishes, fisheries conservation (CofC)
SANDIFER, Paul A. Ph.D., University of Virginia. Biology of decapod Crustacea, aquaculture, coastal ecology (NOAA/NOS)

SANGER, Denise M. Ph.D., University of South Carolina. Impacts of human land use, benthic ecology, water quality, sediment chemistry, and toxicology (S.C. Sea Grant)
SAUTTER, Leslie R. Ph.D., University of South Carolina. Biological oceanography, marine phytoplankton ecology, marine geology (CofC)
SCHOLTENS, Brian G. Ph.D., University of Michigan, Ann Arbor. Ecological models of plant-insect interactions (CofC)
SCHWACKE, Lori H. Ph.D., Medical University of South Carolina. Development and application of mathematical and computer models for the analysis of marine mammal health data (NOAA/Natl. Ocean Svc. Charleston Lab)
SCOTT, Geoffrey I. Ph.D., University of South Carolina. Aquatic toxicology (NOAA/Natl. Ocean Svc. - Charleston Lab)
SEDBERRY, George R. Ph.D., College of William and Mary. Community population and trophic ecology of marine fishes, coral reef biology, fisheries biology (Gray's Reef National Marine Sanctuary)
SEGARS, Al DVM, University of Georgia. Health/population assessment in marine turtles (SCDNR Marine Division)
SHEDLOCK, Andrew Ph.D., University of Washington. Comparative genomics, evolutionary genetics, and conservation biology of marine vertebrates; impact of mobile DNA on eukaryotic genome structure and transcriptome function; systematics of retroelements (CofC)
SHERVETTE, Virginia R. Ph.D., Texas A\&M University. Estuarine ecology and management, conservation biology, fish ecology, oyster reef ecology, urbanization of estuaries, human dimensions of fisheries management, tropical ecology (SCDHEC/Belle Baruch)
SMART, Tracey Ph.D., University of Oregon. Marine ecology, fisheries science, and biological oceanography (SCDNR/MRRI)
SOTKA, Erik Ph.D., University of North Carolina at Chapel Hill. Ecology and evolution of marine biotic interactions, larval dispersal, molecular ecology, chemical ecology (CofC)
STRAND, Allan E. Ph.D., New Mexico State University. Molecular ecology, evolution, and demography of plants (CofC)
TRIBLEHORN, Jeffrey D. Ph.D., University of Maryland. Sensory neurobiology and the neural control of behavior primarily involving invertebrate systems and includes studies using neurophysiological, neuroanatomical, and behavioral techniques. (CofC)

VANCE, Jason T. Ph.D., University of Nevada, Las Vegas. Biomechanics, aerodynamics, and control of insect flight; ontogeny of maximal flight performance and foraging behavior in honey bees (CofC)
VAN DOLAH, Frances M. Ph.D., Medical University of South Carolina. Functional genomics of toxic dinoflagellates; effects of algal toxins on marine mammals and human consumers (NOAA/Natl. Ocean Svc. Charleston Lab)
VAN DOLAH, Robert F. Ph.D., University of Maryland. Benthic ecology, toxicology, environmental assessment, invertebrate community structure, population dynamics (SCDNR/MRRI)
WALTERS, Keith Ph.D., University of South Florida. Marine ecology, habitat restoration, marine snow dynamics, plant-animal interactions, meiofauna (Coastal Carolina University)
WEINSTEIN, John E. Ph.D., University of South Carolina. Environmental toxicology; physiological ecology and toxicology of invertebrates and fish (The Citadel)
WELCH, Allison M. Ph.D., University of Missouri-Columbia. Ecology, evolution and behavior of amphibians (CofC)
WHITAKER, J. David M.S., College of Charleston. Crustacean fisheries resource research (SCDNR/MRRI)
WILBER, Dara Ph.D., Florida State University. Ecological impact assessment in the marine and estuarine environment. (Bowhead Science and Technology)
WILBER, Pace Ph.D., Florida State University. Geographical information systems (NOAA Fisheries)
WIRTH, Edward F. Ph.D., University of South Carolina. Effects of pesticides on crustaceans, particularly reproduction and physiology (Natl. Ocean Svc. Charleston Lab)
WISEMAN, D. Reid Ph.D., Duke University. Systematics and ecology of marine algae (CofC)
WOODLEY, Cheryl M. Ph.D., Medical University of South Carolina. The application of biochemistry, molecular and cellular biology to understanding the effects of biotic and abiotic stressors on ecosystem health (NOAA/Natl. Ocean Svc. - Charleston Lab)
WYANSKI, David M. M.S., College of William and Mary. Life history and taxonomy of marine fishes, fisheries biology (SCDNR/MRRI)
ZARDUS, John D. Ph.D., Northeastern University. Evolution and ecology of commensal barnacles (The Citadel)

## ZIMMERMAN, Anastasia M. Ph.D.,

 Washington State University. Molecular evolution of the vertebrate immune system, genome-wide analyses of innate and adaptive immune loci in fishes, use of the zebrafish as an immunological model (CofC)
## Mathematics Program

## ANGUELOVA, Iana, Ph.D. Assistant

 Professor University of Illinois at UrbanaChampaign, Vertex Algebras, Fluid Dynamics (CofC)CALINI, Annalisa, Professor, Ph.D., University of Arizona. Geometric aspects of integrable systems, nonlinear partial differential equations, chaos in finite and infinite dimensional dynamical systems, mathematical physics. (CofC)
CARTER, James, Professor, Ph.D., University of Illinois, Champaign-Urbana. Algebraic number theory (CofC)
CAVENY-NOECKER, Deanna, Associate Professor, Ph.D., University of Colorado, Boulder. Transcendental number theory (CofC)
CHEN, Mei Q., Professor, Ph.D., University of Illinois. Numerical linear algebra and optimization (The Citadel)
COX, Ben, Professor, Ph.D., University of California, San Diego. Representation Theory; Infinite Dimensional Lie Algebras (CofC)
DIAMOND, Beverly, Professor, Ph.D., University of Manitoba. Topology, dynamical systems (CofC)
ENGLAND, Michael Rohn, Senior Instructor, Ph.D., University of Virginia. Nonlinear elasticity, shell theory (CofC)
GOLIGHTLY, William L., Associate Professor Emeritus, Ph.D., Emeritus, Clemson University. Analysis (CofC)
HARRISON, Gary W., Professor, Ph.D., Michigan State University. Mathematical ecology, numerical analysis, dynamical systems (CofC)
HOWELL, Jason, Assistant Professor, Ph.D., Clemson University, Numerical Analysis, Computational Mathematics (CofC)
IVEY, Thomas, Professor, Ph.D., Duke University. Geometry and differential equations (CofC)
JIN, Renling, Professor, Ph.D., University of Wisconsin-Madison. Foundations of mathematics, math logic, nonstandard analysis (CofC)

JONES, Martin, Professor, Ph.D., Georgia
Institute of Technology. Probability and statistics (CofC)
JURISICH, Elizabeth, Associate Professor, Ph.D., Rutgers University. Infinite dimensional lie algebras; vertex operator algebras (CofC)
KAI, Bo, Assistant Professor, Ph.D. Pennsylvania State University. Robust Modeling, Nonparametric and Semiparametric Methods, High-Dimensional Data Analysis, Model Selection, Bioinformatics (CofC).
KASMAN, Alex, Professor, Ph.D., Boston
University. Algebraic geometry; mathematical physics (CofC)
KUNKLE, Tom, Associate Professor, Ph.D., University of Wisconsin, Madison. Numerical approximation (CofC)
LAFORTUNE, Stephane, Associate
Professor, Ph.D., University of Paris VII and University of Montreal. Integrable systems, applied analysis.
LANGVILLE, Amy N., Associate Professor, Ph.D., North Carolina State University. Numerical linear algebra, numerical methods, operations research (CofC)
LEMESURIER, Brenton, Associate Professor, Ph.D., Courant Institute of Mathematical Sciences at New York University. Numerical methods, partial differential equations (CofC)
LI, Jiexiang, Associate Professor, Ph.D., Indiana University. Classical parametric estimation, nonparametric estimation on random fields (CofC)
MIGNONE, Robert J., Professor, Ph.D., Pennsylvania State University. Logic/set theory (CofC)
MITCHENER, W. Garrett, Associate Professor, Ph.D., Princeton University. Applied mathematics, dynamical systems, stochastic processes with applications to population dynamics and learning models (CofC)
NORTON, Robert, Ph.D., Professor Emeritus, Oklahoma State University. Statistical Process Control (CofC)
PARK, Jin-Hong, Ph.D. Associate Professor, University of Georgia, Dimension Reduction in Time Series Nonparametric Methods, Applied Time Series Modeling, Financial and Econometric Applications in Statistics (CofC)
POTHERING, George, Professor Emeritus, Ph.D., University of Notre Dame. Algorithm analysis, automated deduction (CofC)
PRZEWORSKI, Andrew Ph.D. Assistant Professor, University of Chicago. Geometry and Topology (CofC)

SARVATE, Dinesh G., Professor, Ph.D., University of Sydney. Combinatorics (CofC)
SHIELDS, Sandra, Professor, Ph.D., University of North Carolina, Chapel Hill. Geometric topology, dynamical systems (CofC)
SILVERMAN, Herb, Distinguished Professor, Ph.D., Syracuse University. Complex/real analysis (CofC)
SMIRNOV, Oleg, Associate Professor, Ph.D., Institute of Mathematics of the Russian Academy of Sciences, Novosibirsk. Algebra (CofC)
THOM, Katherine Johnston, Professor, Ph.D., Vanderbilt University. Semigroups, universal algebra (CofC)
VARTANIAN, Arthur, Associate Professor, Ph.D., Universite de Bourgogne. Applied Analysis and Applied Mathematics(CofC)
YOUNG, James, Senior Instructor, Ph.D., University of California, Berkeley. Stochastic processes and dynamical systems (CofC)
YOUNG, Paul, Professor, Ph.D., Oklahoma State University. Number theory, P-adic differential equations (CofC)

## Performing Arts

CHANDLER, Karen, Associate Professor, Ph.D., New York University
COLLINS, Paul, Assistant Professor, M.F.A. University of Iowa
LYNDRUP, Allen, Associate Professor, M.F.A. University of Georgia

MCBROOM, Deanna, Professor, M.M., University of Louisville
MCLAINE, Gretchen S., Associate Professor, Ph.D., Marywood University
MCNERNEY, Todd, Associate Professor, M.F.A. University of Iowa

MORRIS, Valerie, Professor, M.A., University of Michigan
SPRINGER, Bonnie C., Associate Professor, Ph.D., University of Georgia
TAYLOR, Robert J., Professor, D.M.A., Louisiana State University
TURNER, Laura, Associate Professor, M.F.A. New York University

## Public Administration Program

CHAFFIN, LaTasha, Assistant Professor, Ph.D., Western Michigan University, Human resource management, public policy, public management

CHANDLER, Karen, Associate Professor, Ph.D., New York University. Arts and cultural management, case study and ethnographic methodology
EWALT, JoAnn, Professor and M.P.A. Program Director, Ph.D., University of Kentucky. Public policy, program evaluation, policy analysis, and research methods

JOS, Philip H., Professor, Ph.D., University of South Carolina. Administrative ethics and accountability, public policy; administrative theory
KEENAN, Kevin, Assistant Professor, Ph.D. Clark University. Urban planning, urban geography, suburbanization, qualitative methods, terrorism

KEY, Janet L., Instructor, M.P.A., College of Charleston. Human resource management, nonprofit administration
KNOTTS, H. Gibbs, Professor, Ph.D., Emory University. Public budgeting, southern politics, American politics.

MILLS, Lindeke, Instructor, J.D., Georgetown University. Environmental and land use law

MORRIS, Valerie, Professor, M.A., University of Michigan. Arts education

SHANKLIN-PETERSON, Scott, Senior
Fellow in Arts Management, B.A., Columbia College. Arts and public policy, arts management
STEWART, Kendra B., Associate Professor Ph.D, University of South Carolina. Organizational behavior, public policy, nonprofit organization

## Science and Mathematics for Teachers

COLGAN, Mitch, Associate Professor, Ph.D., University of California at Santa Cruz. Climatology, environmental issues, reef ecology, and remote sensing (CofC)

DEAVOR, James, Professor, Ph.D., University of South Carolina. Analytical chemistry (CofC)
FLORENCE, Hope, Assistant Professor, M.S., University of South Carolina. Mathematics (CofC)
GUTSHALL, Anne, Assistant Professor, Ph.D. University of South Carolina. teacher education (CofC)
HARRISON, Gary, Professor, Ph.D., Michigan State. Mathematics. Biological models (CofC)
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