

# GRADUATE SCHOOL

Graduate School information is available at [www.grad.clemson.edu](http://www.grad.clemson.edu).

Graduate students are subject to the usual procedures and regulations of the University, except where these apply to undergraduate students only. Immediately upon enrollment, students should become acquainted with the degree requirements and the regulations published in this catalog.

## THE GRADUATE SCHOOL

The purpose of the Graduate School is to promote superior research and scholarship and provide the highest levels of education and training for students who may pursue careers in academia, government, the nonprofit sector, business, and industry. The mandate of the Graduate School is to assist departments in recruiting and supporting outstanding students who will be capable of continual inquiry into fundamental questions in their fields and who can communicate clearly their findings through research, scholarship, teaching, and service.

The Graduate School coordinates University-wide efforts in graduate education and is responsible for policies and standards governing graduate education. Clemson University's Graduate School administers all graduate programs of the University. Clemson University offers one educational specialist, 73 master's, and 39 doctoral degrees. The Graduate School oversees University fellowships and assistantships for graduate students.

The goals of the Graduate School are

- to assist in recruitment and retention of a diverse group of scholars
- to maintain uniformly high standards across all programs and evaluate degree programs
- to serve as a mediator for the graduate community
- to establish and promote a scholarly environment at all levels of inquiry
- to facilitate graduate program development and assist and coordinate interdisciplinary programs
- to develop and increase sources of financial support for graduate students
- to advocate and promote the well-being of graduate education

## GRADUATE STUDY

Graduate study is much more than a continuation of undergraduate work. Its true spirit is one of inquiry and the desire to add to human knowledge. Graduate study, therefore, should be contemplated only by students who have already demonstrated in their undergraduate programs unusual intellectual attainments and the power of independent thought and investigation.

A great university is distinguished by the quality and dedication of its faculty, the excellence of its graduates, and the pursuit of new knowledge through research and scholarship. Graduate education is a core mission of a research university. The unique nature of graduate education is its contribution to

new knowledge through research and the integration of that knowledge through education and public service grounded in research. The presence of rigorous graduate programs enhances the quality of instruction available to all students. Graduate admissions policies and processes are reviewed annually by the Graduate Advisory Committee.

Today graduate education is more crucial than ever because the global economy is knowledge-based. To survive and thrive, society needs ever-increasing amounts of knowledge; and that means graduate education. The well-being of South Carolina's economy and of our society depends on producing a sufficient number of well-educated and well-trained graduate students in a variety of fields.

Courses are offered leading to the research degrees of Master of Arts, Master of Science, and Doctor of Philosophy. In addition, courses are offered leading to the professional degrees of Education Specialist; Master of Agricultural Education; Master of Architecture; Master of Arts in Teaching; Master of Business Administration; Master of City and Regional Planning; Master of Construction Science and Management; Master of Education; Master of Engineering; Master of Fine Arts; Master of Forest Resources; Master of Human Resource Development; Master of Landscape Architecture; Master of Parks, Recreation, and Tourism Management; Master of Professional Accountancy; Master of Public Administration; Master of Real Estate Development.

## ADMINISTRATIVE MISSION

It is the administrative mission of the Graduate School to serve the unique needs of the students, faculty, staff, and the general public. Through efficient systems, the Graduate School encourages success by providing accurate information in a friendly and supportive environment. The Graduate School upholds quality academic and professional standards and provides guidance to facilitate the accomplishment of Clemson University's broader mission of teaching, research, and public service.

## ACADEMIC MISSION

The academic mission of the Graduate School is to foster excellence in scholarship and research and to ensure the highest quality and diversity of graduate education in keeping with the land-grant mission of teaching, research, and public service.

## GRADUATE COUNCIL

University faculty provide direction for the Graduate School through the Graduate Council. The council provides oversight for policy and procedural implementation related to graduate education; receives, stimulates, and originates proposals for the development of graduate education; reviews, considers, and disseminates recommendations from its constituent committees; and approves and forwards recommendations to the Academic Council. The Graduate Council has six committees described below. Their purposes, roles, and compositions are prescribed by the *Faculty Manual*.

The Graduate Advisory Committee reviews policies on noncurricular student academic matters and on

issues affecting the general welfare of graduate students. The Admissions and Continuing Enrollment Committee addresses concerns related to admission procedures and dismissals from graduate programs. The Fellowships and Awards Committee selects recipients for University-wide fellowships and graduate awards. The role of the Academic Grievance Committee is outlined in detail in the section entitled *Grievances*. The Graduate Curriculum Committee acts for the faculty in reviewing proposals for curricular changes and recommends such changes to the provost. This committee is comprised of the Dean of the Graduate School, as a nonvoting chair, and faculty elected from college curriculum committees. Graduate Curriculum Committee meetings are open to graduate students and faculty. The Academic Integrity Committee hears appeals concerning possible academic dishonesty by graduate students.

## GRADUATE STUDENT GOVERNMENT

The mission of the Clemson Graduate Student Government (CGSG) is to represent the interests of all graduate students at Clemson University in four vital focus areas:

- Involvement—to encourage graduate student participation in the University process
- Communication—to act as liaison between the University and graduate students with an emphasis on honest and open communication
- Collaboration—to promote the efforts of graduate students and the University into one united mission of making the Clemson experience one of quality education and reward
- Development—to provide participatory learning experiences that allow for the enhancement of graduate students' academic, civic, social, and professional development

The CGSG is composed of all graduate students at Clemson University. Its Senate consists of one representative from each academic department. The Executive Board is comprised of the president, vice president, secretary, treasurer, and chairs of the CGSG committees. In addition, there are board seats for the executive assistant, news editor, and assistant news editor.

The CGSG elects representatives to various University boards, commissions, committees, or councils that solicit graduate student opinions. CGSG also participates in the planning and implementation of Graduate Student Orientation and the Graduate Student Research Forum. Information is available at [people.clemson.edu/~gsg/](http://people.clemson.edu/~gsg/).

## SCIENTIFIC RESEARCH

Graduate students conducting scientific research in a student role at Clemson University do so with the full understanding of the following:

1. At the discretion of their thesis advisors or employment supervisors, as appropriate, students may be required, at the initiation of the research efforts, to maintain and preserve all primary data and materials associated with the research and deliver these materials to their supervisors in complete, cataloged, and identified form before the students will have been deemed to have completed the requirements for their programs of study; and

2. At the discretion of their thesis advisors or employment supervisors, as appropriate, students may be required to keep clear, concise, and complete research notebooks as accurate records of their research activities and deliver these to their supervisors before they will have been deemed to have completed the requirements for their program of study.

## RESEARCH OPPORTUNITIES

### Research Division

Founded as a land-grant college dedicated to expanding the frontiers of knowledge to solve the problems of mankind, Clemson University is ranked among the top 35 universities in the United States in terms of revenue from patents and licenses. Ongoing research initiatives throughout the University are critical to maintaining America's competitiveness in a global marketplace and keeping our industries on the leading edge of progress. The Research Division coordinates the following activities: sponsored research; educational services; public service proposals to outside agencies; patent disclosures, applications, and negotiations of licensing agreements; research compliance and facility security clearance.

Information and assistance are available on applications for research support from federal and state agencies, industrial organizations, foundations, and institutes, as well as fellowships of interest to the faculty.

The Vice President for Research oversees all aspects of campus research, providing advice on University research activities and administrative support for the internal funding of annual faculty research grants and awards.

### Center for Advanced Engineering Fibers and Films

The Center for Advanced Engineering Fibers and Films (CAEFF) is a National Science Foundation Engineering Research Center that comprises a partnership between Clemson University and the Massachusetts Institute of Technology. The Center provides an integrated research and education environment for the systems-oriented study of fibers and films. To understand structure/property relationships in polymeric fibers and films, industries need a complete science base, computational models that integrate molecular information with continuum or microscopic-level models, and advanced visualization tools, as well as a new generation of engineers and scientists with experimental, modeling, and visualization expertise. CAEFF promotes the transformation from trial-and-error development to computer-based design of fibers and films.

CAEFF's strategic plan ties research and fundamental science, enabling technology, and engineered systems to marketplace needs. The Center's integrated testbeds provide proving grounds for interdisciplinary research projects. To address issues targeted by the Center's strategic plan, CAEFF's interdisciplinary research teams combine expertise in numerical modeling, analytical characterization, fiber and film formation, polymer processing, visualization, software development, and usability testing.

An integral part of CAEFF's mission is the education of students and professionals in the practice of fiber/film science and engineering. The educational philosophy of the Center values interdisciplinary, systems-related, holistic learning. Key features of the education program include curriculum development, communication skills, industry involvement, recruitment of underrepresented minorities and women, and outreach to pre- and post-college student populations.

A trusted partnership with industry allows the center to achieve its vision. CAEFF depends on active company support for its research and education programs and rapid transfer of technology to industry. Company representatives sit on the Industrial Advisory Board, which establishes research priorities and evaluates the center's progress toward its goal. Through their influence on center research programs, companies can directly impact the next generation of fiber and film industry personnel.

### Center for Optical Materials Science and Engineering Technologies

The Center for Optical Materials Science and Engineering Technologies (COMSET) is an internationally recognized centerpiece program at Clemson University focused on cutting edge research, education, and technology transfer on materials for optical fiber and related photonic technologies. COMSET investigators are a multidisciplinary team of faculty. Research thrusts include the synthesis, characterization, and integration of optic ceramics and nanomaterials into application-specific structures for telecommunications, imaging, sensing, displays, and numerous other commercially critical technologies. Since its founding in 2000, COMSET has received over \$13 million in research funding from federal, state, and industrially sponsored programs, including ones from the National Science Foundation (NSF), Defense Advanced Research Projects Agency (DARPA), U.S. Army Research Office (ARO), U.S. Air Force Office of Scientific Research (AFOSR), U.S. Office of Naval Research (ONR), National Aeronautics and Space Administration (NASA), South Carolina Commission of Higher Education, Yazaki Corporation, 3M Corporation, and Dow Chemical, to name a few.

### Clemson University Experiment Station

The Clemson University Experiment Station is part of a nationwide system of scientists working to improve the quality of life for people in their home state, the nation, and the world.

Both undergraduate and graduate students work with researchers to develop science-based information needed to address issues such as agricultural productivity and profitability, economic and community development, environmental conservation, food safety and nutrition, and youth development.

Clemson scientists have been involved in agricultural and forestry research since 1889 when Clemson University was founded. Today, research is conducted in state-of-the-art laboratories, as well as on farms and forests at the Clemson campus and at five research and education centers strategically located in the state's distinct soil and climate regions.

Clemson researchers collaborate with colleagues on studies that span the globe. Their studies include the genetic structure and functions for plants and animals, the impact of urban sprawl on the environment, techniques to reduce bullying in schools, the active ingredients in medicinal plants, and the use of nanotechnology in food packaging to detect contamination. Their work has produced more than 100 new varieties of food and fiber crops and more than 40 patents. Each year, work is conducted on more than 100 projects funded through federal, state, and private sources, including the U.S. Department of Agriculture, the U.S. Forest Service, the National Science Foundation, the South Carolina General Assembly, and corporate partners.

### Clemson University Genomics Institute

The Clemson University Genomics Institute (CUGI) is a state-of-the-art research and training facility focusing on the discovery and functional analysis of important genes from plants, plant pests, animals, and microbes using the specialized tools of genomics. The application of genomics to agriculture, human health, and the environment will ensure continued improvement in crop productivity and environmental systems to feed and nurture an ever-growing world population.

The mission of CUGI is

- to serve as a BAC and EST library development for the genomes of agriculturally and environmentally important plants, animals, and microbes
- to serve as a repository and distribution center for BAC and EST library resources (clones, filters, and whole libraries) to the genomics community with an emphasis on agriculture and the environment
- to provide high-throughput DNA sequencing and physical mapping for identifying and characterizing important genes and genomic regions
- to develop and apply new approaches and research tools for genomics research
- to provide training for undergraduate, graduate, postdoctoral, and visiting scientists in genomics

### Godley-Snell Research Center

The Godley-Snell Research Center (GSRC) opened in 1995 as a full-service, state-of-the-art animal research facility. GSRC provides specialized facilities and resources to support biomedical and agricultural animal research and teaching programs at the University. GSRC is managed by the Office of Research Services under the direction of the University Veterinarian. Research Services is dedicated to providing the staff, facilities, and technology to support high quality animal research programs. Research Services staff includes veterinarians and professional and technical staff with training and experience in animal research.

GSRC provides laboratory animal housing for large and small research animals. GSRC maintains fully equipped support facilities including surgical operating rooms, procedural areas, radiology, ABSL3 biocontainment suites, necropsy, and laboratory bench space.

All Clemson University animal research facilities and programs have received full accreditation from the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC), and all animal programs meet or exceed the standards required by the federal Animal Welfare Act regulations and the Public Health Service Policy for the Humane Care and Use of Laboratory Animals.

### Oak Ridge Associated Universities

Since 1952, students and faculty of Clemson University have benefited from its membership in Oak Ridge Associated Universities ([www.orau.org](http://www.orau.org)). ORAU is a consortium of 91 colleges and universities and a contractor for the U.S. Department of Energy (DOE) located in Oak Ridge, Tennessee. ORAU works with its member institutions to help their students and faculty gain access to federal research facilities throughout the country; to keep its members informed about opportunities for fellowship, scholarship, and research appointments; and to organize research alliances among its members.

Through the Oak Ridge Institute for Science and Education (ORISE), the DOE facility that ORAU operates, undergraduate, graduate, and postgraduate students, as well as faculty, enjoy access to a multitude of opportunities for study and research. Students can participate in programs covering a wide variety of disciplines including business, earth sciences, epidemiology, engineering, physics, geological sciences, pharmacology, ocean sciences, biomedical sciences, nuclear chemistry, and mathematics. Appointment and program length range from one month to four years. Many of these programs are especially designed to increase the numbers of underrepresented minority students pursuing degrees in science- and engineering-related disciplines. A comprehensive listing of these programs and other opportunities, their disciplines, and details on locations and benefits can be found in the *ORISE Catalog of Education and Training Programs* at [www.orau.gov/orise/educ.htm](http://www.orau.gov/orise/educ.htm) or by contacting either of the following:

R. Larry Dooley, Associate Dean of Research and Graduate Studies; ORAU Councilor for Clemson University

Monnie E. Champion, ORAU Corporate Secretary, 865-576-3306

ORAU's Office of Partnership Development seeks opportunities for partnerships and alliances among ORAU's members, private industry, and major federal facilities. Activities include faculty development programs, such as the Ralph E. Powe Junior Faculty Enhancement Awards, the Visiting Industrial Scholars Program, consortium research funding initiatives, faculty research and support programs as well as services to chief research officers.

### Institute on Family and Neighborhood Life

The Institute on Family and Neighborhood Life generates, shares, and applies the knowledge needed to strengthen ties between families and communities. IFNL's work is based on the premise that help is most acceptable, efficient, and effective when it is "built in," so that it is a part of everyday life. IFNL's research focuses on the everyday experience

of children, youth, and adults in neighborhood institutions, such as schools, workplaces, religious organizations, civic organizations, and justice-system agencies. IFNL faculty seek to provide the knowledge necessary to enable those institutions to ensure respect for individual dignity, enhance "natural" social assistance, build a sense of community, promote civic participation, and encourage family and neighborhood responsibility. They also strive to understand ways that public policy supports or hinders families and neighborhoods in these tasks and to offer alternatives that foster the creation of neighborly ("family-friendly") communities.

To accomplish these goals, IFNL works at all levels from neighborhood to global, in part because a comparative perspective offers new insights in understanding grassroots phenomena in neighborhoods and developing effective responses in public policy and community-development practice. IFNL is a Key Institution in Childwatch International, a global network of child research centers. IFNL also has partnerships for research, public service, and graduate education with universities in Armenia, the Czech Republic, the Dominican Republic, Estonia, India, South Africa, and Thailand.

### Robert H. Brooks Research Institute for Sports Science

Founded in 1994 through a \$2.5 million pledge from alumnus Robert H. Brooks, the Brooks Research Institute supports interdisciplinary teaching, research, and student learning opportunities in the thriving sports, recreation, and leisure industries. The Brooks Institute is distinctive for its focus on the study of sports from a technological, managerial, and cultural perspective as opposed to the psychological aspects of individual sports participation.

The goals of the institute are

- to support an interdisciplinary focus on sports science that incorporates the broad areas of engineering and science, business, marketing, and communication
- to facilitate faculty work in cross-disciplinary teams
- to provide sports-related academic courses, hands-on research opportunities, cooperative education, and internship opportunities for undergraduate and graduate students
- to promote career opportunities for Clemson graduates in the sports industry.

### Robert J. Rutland Institute for Ethics

The Robert J. Rutland Institute for Ethics provides the campus and the community with a forum for exploration and discussion of ethical issues in campus and community life. In addition, the Institute offers programs and sponsors activities aimed at the development in students, faculty, and members of the community the wherewithal to deal systematically, reflectively, and responsibly with the ethical issues that pervade human life and action.

Both purposes are in keeping with the mission and guiding principles of Clemson University. According to Clemson's mission statement, "Academic institutions exist for the transmission of knowledge, the pursuit of truth, the intellectual and ethical development of students, and the general well-be-

ing of society." The guiding principles indicate that Clemson's educational goals for all students include "developing their communication and critical thinking skills, ethical judgement, global awareness, and scientific and technological knowledge." The Rutland Institute for Ethics is dedicated to nurturing an ethical environment on and off campus.

### South Carolina Institute for Energy Studies

The South Carolina Institute for Energy Studies (SCIES) is a state-chartered research and development organization established in 1981 via the SC-82 General Appropriations Act. SCIES is administratively housed at Clemson University.

The objectives of SCIES are

- to promote energy research and development in and for the state
- to transfer energy technology developed by others to South Carolina applications
- to contribute to national energy issues in areas of excellence
- to promote statewide energy education activities

To accomplish the objectives, SCIES may interact with all departments the University, all colleges within South Carolina, state agencies, federal agencies, and private industry throughout the nation.

### Spiro Institute for Entrepreneurial Leadership

Entrepreneurship is the process of recognizing an opportunity and organizing a response under uncertain conditions and with limited resources. The Spiro Institute for Entrepreneurial Leadership, a unit within the College of Business and Behavioral Science, was created in 1995 with an endowment gift from Clemson University graduate Arthur M. Spiro. The mission of the Institute is "to support education, research, and outreach programs that promote entrepreneurial activity and economic development in the region, state, and nation." The Institute is committed to an interdisciplinary approach to entrepreneurship at Clemson University and supports research into entrepreneurship topics, provides educational programs for undergraduate and graduate students from all colleges, and conducts outreach activities that provide assistance to inventors and entrepreneurs in South Carolina and the region.

### Strom Thurmond Institute

The Strom Thurmond Institute of Government and Public Affairs conducts applied research in public policy areas, drawing on the expertise of faculty, staff, and students from all colleges at Clemson University. The Institute is organized into two centers and several self-directed teams which assess opportunities, develop projects, form partnerships, and deliver programs to the public and clients of the Thurmond Institute. Graduate research opportunities include natural resource policy, remote sensing, GIS and urban growth modeling through the South Carolina Water Resources Center; demographic projections, return on public invest assessments, education finance policy, and organizational networks through the Jim Self Center on the Future; and fiscal policy, civic engagement, pricing public

goods, and governmental organizational structures through Institute work groups. Preference is given to students enrolled in Clemson's interdisciplinary PhD program in Policy Studies.

### Traveling Scholars Program

Doctoral students at participating universities can benefit from membership in the Inter-Institutional Academic Collaborative (IAC) involving universities of the Atlantic Coast Conference (ACC). Through the IAC, students have unique educational opportunities at participating ACC universities without change in registration or increase in tuition. Academic visits can vary from two weeks to two semesters. Any regularly admitted graduate student in good standing in a doctoral degree program may apply. A limited number of relocation stipends of up to \$1000 per individual are available upon application; however, it is not necessary to win a stipend to participate in the program.

Currently, Clemson University, Duke University, Florida State University, Georgia Institute of Technology, University of Maryland, North Carolina State University, University of North Carolina, University of Virginia, and Wake Forest University participate in the IAC.

Interested students should consult their advisors, who will evaluate the value of the IAC program and determine if the opportunity is not available at Clemson. Once eligibility and opportunity have been determined, the applicant and advisor will contact proper faculty at the proposed host university. If an agreement is reached and space and facilities are available, the applicant and advisor compose and sign a formal application to the IAC Traveling Scholars Program, available at [www.grad.clemson.edu](http://www.grad.clemson.edu).

## ENROLLMENT OPPORTUNITIES

### Distance Education

Though most degree programs offered by the University are available primarily on campus, Clemson University sponsors programs designed to serve the needs of off-campus students. Distance Education courses and programs are available through satellite broadcast, Internet, videoconference technologies, videotape, CD, or DVD.

Courses broadcast through the SCETV digital satellite system (one-way video and two-way audio) can be received at approximately 2,000 locations in South Carolina and more across the nation. Remote site students can interact with the instructor during class sessions via a toll-free telephone number.

Courses delivered using videoconferencing technologies have the advantage of synchronous two-way video and audio connections with other locations.

Courses taught through the Internet, CD/DVD, or videotape offer the most flexibility for students. Those courses typically do not have face-to-face class meetings. Instructors and students interact via the Internet (both synchronously and asynchronously), e-mail, and telephone.

Courses taught in more traditional face-to-face classroom settings are available in Greenville, SC, at the University Center of Greenville and in Greenwood, SC, through the Lander-Clemson Graduate Center at Lander University.

More information about Distance Education credit programs and courses is available by e-mail from [ets-l@clemson.edu](mailto:ets-l@clemson.edu).

### University Center of Greenville

The University Center of Greenville is a consortium of seven South Carolina universities offering degree programs in Greenville. In addition to Clemson University, the consortium includes Furman University, Lander University, the Medical University of South Carolina, South Carolina State University, the University of South Carolina, and the University of South Carolina Upstate.

The Center is housed at McAlister Square Mall on South Pleasantburg Drive in Greenville. Member institutions maintain offices at the site to serve students' needs, and support personnel are on site during all class times.

The facility has a virtual library with 50 Dell computers, six computer labs, six distance education studios, a 120-seat auditorium, and 40 classrooms. All classrooms are equipped with TV/VCR, overhead projectors, and Internet access. Twelve smart classrooms are available.

Classes are conducted Monday–Saturday during day and evening hours. Business hours are 9:00 A.M.–6:00 P.M., Monday–Thursday and 8:30 A.M.–1:00 P.M. on Friday. The library is open 9:00 A.M.–5:30 P.M. on Saturday and 1:00–5:30 P.M. on Sunday.

Currently, 23 bachelor's degrees, 25 master's degrees, and two doctorates are available on-site in Greenville from the seven universities. Clemson offers seven degree programs at the Center.

Information is available at [www.greenville.org](http://www.greenville.org).

### Professional Development Programs

The College of Health, Education, and Human Development sponsors professional development programs for teachers and other working professionals. Courses for teachers are offered for academic credit and are requested or sponsored by school districts. Additional information is available from the College of Health, Education, and Human Development Office of Distance Education at (864) 656-5097 or at [www.hehd.clemson.edu/ode/](http://www.hehd.clemson.edu/ode/).

### Study Abroad

All Clemson University students are encouraged to enroll in courses designed to expand their knowledge and understanding of world affairs. The opportunity to study abroad, while essentially a component of the undergraduate curriculum, is encouraged in many graduate programs. Graduate students in Architecture, for example, spend a semester at the Charles E. Daniel Center for Building Research and Urban Studies in Genoa, Italy. Students in the Master of Business Administration program may study full time or part time in Asolo, Italy, and at the University of Newcastle in Australia. Additional information is available from academic departments and through the Study Abroad Office in E-309 Martin Hall.

Degree Program	Delivery
Education Specialist in Administration and Supervision Doctor of Philosophy in Educational Leadership	University Center of Greenville Internet (selected courses only) Coastal Carolina University
Master of Arts in Teaching in Middle Grades Education Master of Business Administration Master of Construction Science and Management	University Center of Greenville University Center of Greenville DVD Internet
Master of Education in Administration and Supervision Master of Education in Counselor Education Master of Education in Reading Master of Engineering in Electrical Engineering	University Center of Greenville University Center of Greenville Internet (selected courses only) Satellite broadcast Internet DVD
Master of Human Resource Development Master of Public Administration	Internet University Center of Greenville videoconference
Master of Science in Nursing	Internet (selected courses only) University Center of Greenville
Master of Science in Youth Development Leadership	Internet

See individual department descriptions for program details.

## Academic Common Market

The state of South Carolina, through its membership in the Southern Regional Education Board (SREB), authorizes its public universities to participate in the Academic Common Market (ACM). Under this program, students who are not residents of South Carolina may enroll in selected graduate programs at Clemson University and pay academic fees appropriate for South Carolina residents provided the following conditions are met:

- 1) The student's state of legal residence must be Alaska, Alabama, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Oklahoma, Tennessee, Texas, Virginia, or West Virginia.
- 2) The Coordinating Board in the student's state of legal residence must have selected the program for its residents. Interested students must first contact their own state coordinating boards.

Programs offered by Clemson University are subject to change without notice; however, if the University removes a program from the ACM, students enrolled in that program under the ACM provisions at the time are entitled to continue and receive benefits, provided they are continuously enrolled (summers excepted) and remain in good academic standing. The state coordinator for the Academic Common Market in South Carolina is the Commission on Higher Education.

## DEGREE PROGRAMS ADMINISTERED BY THE GRADUATE SCHOOL

### POLICY STUDIES

#### Doctor of Philosophy

##### Certificate

Clemson University offers graduate studies leading to a PhD degree and a Certificate in Policy Studies. Graduate work in policy studies enables a student to attain a high degree of specialized competence in policy analysis and to secure a mastery of policy research, emphasizing quantitative and economic skills. Government, industry, public policy "think tanks," and other policy research organizations, nonprofit organizations, and universities offer challenging opportunities in policy analysis, issue development, education, and related areas for persons with advanced training.

The program emphasizes quantitative, economic, and political organization as well as other social science skills in the analysis and development of policy. Fundamental and rigorous quantitative and analytical skills for effective policy analysis are developed through core courses in political economy for public policy, ethics, statistical methods for policy research, demographic projections and spatial analysis, policy analysis and political choice, organizational theory and management, applied economics, and a policy analysis workshop. PhD students also select a concentration in Agricultural Policy, Environmental and Natural Resource Policy, Rural and Economic Development Policy, or Science and Technology. Flexibility is also achieved through enrichment, electives, leadership development courses, and the selection of a PhD dissertation topic. The program

consists of a minimum of 63 credit hours beyond the bachelor's degree, of which up to 24 credits may be drawn from master's degree and other postgraduate work. There is no foreign language requirement for the PhD degree in Policy Studies.

The graduate program in Policy Studies also offers students enrolled in related master's and doctoral programs the opportunity to gain competence in and understanding of policy analysis. Depending on students' backgrounds and academic preparation, they may supplement their primary master's coursework with a Certificate in Policy Studies. The Certificate in Policy Studies is designed to equip students with a set of explicit public policy research and analytical skills to augment their preparation in a traditional master's program. The certificate program involves 12 credit hours of coursework.

The faculty in Policy Studies encourages applications for the PhD program from recipients of a master's degree who wish to acquire policy research and analytical skills in economic development, agriculture, natural resource allocation, rural development, small town and community development, tourism development, environmental issues, land use, infrastructure, public finance, growth management, and science and technology. Master's-level students with similar interests are encouraged to enhance their graduate studies with a Certificate in Policy Studies.

The faculty encourages applications from students who have backgrounds that will facilitate an interdisciplinary course of study. In many cases, students may be admitted to full graduate status in the PhD program without prerequisites other than those required of all graduate students.

### INTERNATIONAL FAMILY AND COMMUNITY STUDIES

#### Doctor of Philosophy

The doctoral program in International Family and Community Studies educates professionals to generate, diffuse, and apply knowledge needed to strengthen communities' capacity for family support, meaningful participation, and strong relationships, including mutual assistance. The program prepares graduates as (1) scholars in interdisciplinary institutes or academic departments on child and family studies, social policy studies, international studies, or community development or (2) researchers, planners, or administrators in domestic or international governmental or non-governmental agencies concerned with children, families, and/or communities.

The program is based in the Institute on Family and Neighborhood Life and relies on the Institute's ties with related university programs in Africa, Asia, Europe, and Latin America. Students also have the opportunity to participate in the Institute's community development, policy consultation, and empirical research projects in South Carolina and other states and nations.

With its focus on family and community life, the program touches on the most fundamental aspects of people's everyday lives. Blending the humanities, the social sciences, and various professional disciplines,

the program may be unique in its integration of normative analysis (i.e., philosophical, legal, and religious studies), empirical research, and community development. With a foundation in the study of human rights as applied to children and families around the world, the program builds a comparative understanding of U.S., foreign, and international law and policy on child and family issues and of the significance of democracy for the well-being of individuals, families, and communities. Students acquire an appreciation of the role of civil society (e.g., voluntary associations and nonprofit organizations) and primary community institutions (e.g., schools) in promoting and maintaining democracy. Such studies provide the foundations for an understanding of the principles and practices of community development and transformation, humanitarian assistance, and responsive human services. The important role and features of effective informal mutual assistance mechanisms in community life and their meaning for children and families are also explored.

To provide a richer understanding of human development and family life and to build skills for work in diverse cultures, international study is emphasized. Students are required to become proficient in studies of three world regions and in communication in a language other than their own. Building on the Institute's relationships with universities in developing and transitional countries, students spend at least one academic year in residence at an affiliated center outside North America, where they engage in supervised research and/or public service.

#### Admission Requirements

Applicants must hold a bachelor's or a master's degree from an accredited degree program. In addition to strong academic performance, experience in volunteer and/or professional public service is desirable. Students must submit GRE and/or Miller's Analogy Test scores, three letters of recommendation from professionals familiar with the applicant's academic work and/or community service, and a 500-word essay on the applicant's career aspirations and goals and their relation to this graduate program. Students for whom English is not the first language are also required to submit TOEFL scores. Both U.S. and international students are welcome, as are both new graduates and experienced professionals.

#### Program Requirements

The degree requires 90 credit hours of postbaccalaureate work. A minimum of 36 hours is required of postmaster's degree students. The normal course of study requires four years for postbaccalaureate students.

The program requires EDF 870, FCS 810, 811, 812, 820, 821, 822, 830, 831, 832, 833, 835; plus twelve credits selected from ANTH 603, FCS 840, PSYCH 810, 811, or SOC 805.

In addition, nine credits in area studies of three world regions and nine credits of language studies are required. (Nine of these credits may be at the undergraduate level.) Eighteen credits of dissertation research (FCS 991) are required. Students entering postbaccalaureate must also complete six hours of FCS 890.

An internship (FCS 894) of at least one academic year (two semesters) must be spent in residence at an affiliated center outside North America.

## DEGREE PROGRAMS

Major Code	Major	Degree	Department	Department Chair
<b>College of Agriculture, Forestry, and Life Sciences</b>				
105	Agricultural Education	MAgEd	Agricultural and Biological Engineering	Harold Allen
114	Animal and Veterinary Sciences	MS, PhD	Animal and Veterinary Sciences	Mary Beck
122	Applied Economics*	PhD	Applied Economics and Statistics	Hoke Hill
103	Applied Economics and Statistics	MS	Applied Economics and Statistics	Hoke Hill
805	Biochemistry and Molecular Biology	MS, PhD	Genetics and Biochemistry	Albert Abbott
812	Biological Sciences	MS, PhD	Biological Sciences	Alfred Wheeler
106	Biosystems Engineering*	MS, PhD	Agricultural and Biological Engineering	Harold Allen
TBA	Biotechnology	MS	Genetics and Biochemistry	Albert Abbott
148	Entomology	MS, PhD	Entomology, Soils, and Plant Sciences	Joe Culin
150	Environmental Toxicology*	MS, PhD	Forestry and Natural Resources	Patricia Layton
153	Food, Nutrition, and Culinary Sciences	MS	Food Science and Human Nutrition	Johnny McGregor
156	Food Technology	PhD	Food Science and Human Nutrition	Johnny McGregor
920	Forest Resources	MFR, MS, PhD	Forestry and Natural Resources	Patricia Layton
825	Genetics	MS, PhD	Genetics and Biochemistry	Albert Abbott
865	Microbiology	MS, PhD	Biological Sciences	Alfred Wheeler
180	Packaging Science	MS	Packaging Science	Robert Kimmel
113	Plant and Environmental Sciences	MS, PhD	Biological Sciences; Horticulture; Entomology, Soils, and Plant Sciences	Halina Knap
125	Wildlife and Fisheries Biology	MS	Forestry and Natural Resources	Patricia Layton
124	Wildlife and Fisheries Biology	PhD	Forestry and Natural Resources	Patricia Layton
<b>College of Architecture, Arts, and Humanities</b>				
205	Architecture	MArch, MS	School of Architecture	Ted Cavanagh
213	City and Regional Planning	MCRP	Planning and Landscape Architecture	Daniel Nadenicek
210	Construction Science and Management	MCSM	Construction Science and Management	Ray Schneider
822	Digital Production Arts*	MFA	Digital Production Arts	Timothy Davis
620	English	MA	English	Clifton S. M. Egan
214	Environmental Design and Planning	PhD	Planning and Landscape Architecture	Daniel Nadenicek
208	Historic Preservation	MS	Planning and Landscape Architecture	Daniel Nadenicek
635	History	MA	History	Tom Kuehn
230	Landscape Architecture	MLA	Planning and Landscape Architecture	Daniel Nadenicek
663	Professional Communication	MA	English	Clifton S. M. Egan
212	Real Estate Development*	MRED	Planning and Landscape Architecture	Daniel Nadenicek
615	Rhetorics, Communication, and Information Design*	PhD	Art, Communication Studies, English	Victor Vitanza
240	Visual Arts	MFA	Art	Mike Vatalaro
<b>College of Business and Behavioral Science</b>				
505	Accounting	MPAcc	Accountancy and Legal Studies	Ralph Welton
122	Applied Economics*	PhD	Economics	Raymond Sauer
605	Applied Psychology	MS	Psychology	Fred Switzer
607	Applied Sociology	MS	Sociology	Kinly Sturkie
509	Business Administration	MBA	Business Administration	Caron St. John
511	Economics	MA	Economics	Raymond Sauer
514	Graphic Communications	MS	Graphic Communications	Sam Ingram
639	Human Factors Psychology	PhD	Psychology	Fred Switzer
638	Industrial/Organizational Psychology	PhD	Psychology	Fred Switzer
529	Management	MS, PhD	Management	N. Raju Balakrishnan
539	Marketing	MS	Marketing	Gregory Pickett
670	Public Administration	MPA	Political Science	Joseph Stewart
212	Real Estate Development*	MRED	Finance	John Alexander

Major Code	Major	Degree	Department	Department Chair
<b>College of Engineering and Science</b>				
475	Automotive Engineering	MS, PhD	Mechanical Engineering	Imtiaz Haque
405	Bioengineering	MS, PhD	Bioengineering	Martine LaBerge
106	Biosystems Engineering*	MS, PhD	Agricultural and Biological Engineering	Harold Allen
415	Chemical Engineering	MS, PhD	Chemical and Biomolecular Engineering	James Goodwin
816	Chemistry	MS, PhD	Chemistry	Stephen Creager
420	Civil Engineering	MS, PhD	Civil Engineering	Nadim Aziz
423	Computer Engineering	MS, PhD	Electrical and Computer Engineering	John Gowdy
820	Computer Science	MS, PhD	Computer Science	Pradip Srimani
822	Digital Production Arts*	MFA	Computer Science	Timothy Davis
425	Electrical Engineering	MEngr, MS, PhD	Electrical and Computer Engineering	John Gowdy
440	Environmental Engineering and Science	MEngr, MS, PhD	Environmental Engineering	Alan Elzerman
441	Environmental Engineering and Science (Environmental Health Physics Concentration)	MS	Environmental Engineering	Alan Elzerman
150	Environmental Toxicology*	MS, PhD	Environmental Toxicology	Alan Elzerman
832	Hydrogeology	MS	Geological Sciences	Alan Elzerman
445	Industrial Engineering	MS, PhD	Industrial Engineering	A. Gramopadhye
450	Materials Science and Engineering	MS, PhD	Materials Science and Engineering	Kathleen Richardson
851	Mathematical Sciences	MS, PhD	Mathematical Sciences	Robert Taylor
455	Mechanical Engineering	MS, PhD	Mechanical Engineering	Imtiaz Haque
871	Physics	MS, PhD	Physics and Astronomy	Peter Barnes
540	Polymer and Fiber Science	MS, PhD	Materials Science and Engineering	Kathleen Richardson

### College of Health, Education, and Human Development

303	Administration and Supervision	MEd	Leadership, Counselor Education, Human and Organizational Development	Tony Cawthon
323	Administration and Supervision	EdS	Leadership, Counselor Education, Human and Organizational Development	Tony Cawthon
311	Counselor Education (Community Counseling)	MEd	Leadership, Counselor Education, Human and Organizational Development	Tony Cawthon
306	Counselor Education (School Counseling)	MEd	Leadership, Counselor Education, Human and Organizational Development	Tony Cawthon
312	Counselor Education (Student Affairs)	MEd	Leadership, Counselor Education, Human and Organizational Development	Tony Cawthon
307	Curriculum and Instruction	PhD	Teacher Education	William Fisk
TBA	Early Childhood Education	MEd	Teacher Education	William Fisk
321	Educational Leadership (Higher Education)	PhD	Leadership, Counselor Education, Human and Organizational Development	Tony Cawthon
322	Educational Leadership (P-12)	PhD	Leadership, Counselor Education, Human and Organizational Development	Tony Cawthon
310	Elementary Education	MEd	Teacher Education	William Fisk
327	Human Resource Development	MHRD	Leadership, Counselor Education, Human and Organizational Development	Tony Cawthon
304	Middle Grades Education	MAT	Teacher Education	William Fisk
710	Nursing	MS	Nursing	Rosanne Pruitt
960	Parks, Recreation, and Tourism Management	MPRTM, MS, PhD	Parks, Recreation, and Tourism Management	Brett Wright
324	Reading	MEd	Teacher Education	William Fisk
347	Secondary Education (English)	MEd	Teacher Education	William Fisk
350	Secondary Education (History)	MEd	Teacher Education	William Fisk
353	Secondary Education (Mathematics)	MEd	Teacher Education	William Fisk
365	Secondary Education (Natural Science)	MEd	Teacher Education	William Fisk
378	Special Education	MEd	Teacher Education	William Fisk
383	Youth Development Leadership*	MS	Health, Education, and Human Development	Larry Allen

### Graduate School

822	Digital Production Arts*	MFA	Digital Production Arts	Timothy Davis
117	International Family and Community Studies*	PhD	Institute on Family and Neighborhood Life	Gary Melton
110	Policy Studies*	PhD	Strom Thurmond Institute	Bruce Ransom

\*Interdisciplinary program