Graduate Handbook

Glenn Department of Civil Engineering

Clemson University

Graduate Handbook
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Introduction

The University and the Community

Clemson University (www.clemson.edu) is a public institution dedicated to the development and dissemination of knowledge in many and diversified academic and professional fields. The University is committed to assisting students in their search for knowledge, to helping them understand themselves and their cultural and their physical environments, and to develop in them the wisdom and skills needed to assume responsibility in a democratic society. The University assumes as its historic trust the maintenance and enhancement of an intellectual environment that encourages the development and expansion of the human mind and spirit. While continuing to fulfill its mission as a land-grant institution, Clemson University is evolving and expanding its role to meet the changing needs of state, national, and international communities.

The City of Clemson (www.cityofclemson.org) is located in the scenic foothills of the Blue Ridge Mountains in the northwest corner of South Carolina. Clemson is a small town community located near Greenville, South Carolina. It is only a two-hour drive from Atlanta and Charlotte, and about four hours from the Atlantic Ocean. The main campus of the University is located along the shores of Lake Hartwell. Because of the location and pleasant climate, numerous outdoor recreational activities such as camping, boating, white-water rafting, and hiking are available.

College of Engineering and Science

Fourteen schools and departments form the College of Engineering and Science (http://www.clemson.edu/ces/) at Clemson University. These include not only the traditional engineering programs, but physics, mathematics, chemistry, textile sciences, computer science, and geology as well. Because of the close relationship between engineering and science at Clemson, the application of scientific discovery is more readily applied to the betterment of our built environment. Many engineering and science faculty work closely together in research and education, and share common computing and research facilities. The alliance offers a broad diversity of course work supporting specialized graduate study in civil engineering.

Glenn Department of Civil Engineering

Civil engineering has been taught at Clemson since the University was founded in 1889. Civil engineering became a department in 1932 at the same time the Engineering Department became the School of Engineering.

Today, the Glenn Department of Civil Engineering (http://www.clemson.edu/ce/) offers undergraduate course work in all major fields of civil engineering. Current enrollments are about 500 undergraduate and 110 graduate students. Student organizations include the American Society of Civil Engineers (www.asce.org), the Chi Epsilon Honor Society (www.chi-epsilon.org), and the Institute of Transportation Engineers (www.ite.org).

The department offers graduate degree programs leading to the Master of Science and Doctor of Philosophy degrees. The graduate student to faculty ratio is about 5 to 1. Typical size of graduate courses is about 25 students in introductory graduate courses and about 15 in upper level technical courses.

Within the graduate degree programs offered by the department, there are six primary emphasis areas: Applied Fluid Mechanics, Construction Materials, Geotechnical Engineering, Construction Engineering and Management, Structural Engineering, and Transportation Systems. The faculty in these emphasis areas work closely together to form thrust areas of research in natural and manmade hazard mitigation and construction materials.

The graduate degree programs offered by the Civil Engineering Department prepare students work at high levels within the engineering profession. The degree programs emphasize engineering practice and the advancement of engineering knowledge through research. Because technical advances implemented through business and industry require direction by individuals possessing a strong technical
background, graduates are prepared to move quickly into positions of leadership and responsibility.

**The Information Manual**

This manual has been prepared to assist students in the pursuit of their graduate civil engineering education. Basic admission and graduation policies, programs of study, and reporting requirements are discussed. A checklist has been prepared to help students satisfy the requirements and avoid unnecessary delays. Much of the information contained in this manual has been extracted from the Clemson University Graduate School Announcements (http://www.grad.clemson.edu/catalog/) and policies of the College of Engineering and Science, and the Department of Civil Engineering. If there are discrepancies between these other guidelines and this manual, the more severe criteria will apply unless otherwise stated.

**Prospective Students**

**Admission Procedures**

Each student wishing to pursue a graduate civil engineering degree at Clemson University should submit an application for admission to the Office of Graduate Admissions (http://www.grad.clemson.edu/admission/). All other required documentation should be sent to:

Office of Graduate Admissions  
E-209 Martin Hall  
Clemson University  
Clemson, SC 29634

The complete package will be forwarded to the Department for final processing and approval. Students can check the status of their application using the Graduate School website. If questions arise, applicants should contact Kristi Baker, Student Services Program Coordinator, in the Department of Civil Engineering at kristi@clemson.edu.

For full consideration for assistantships and fellowships, applications for Fall semester should be submitted by February 1st; applications for Spring semester should be submitted by October 1st. For graduate school acceptance only, applications for Fall semester should be submitted by July 1st; applications for Spring semester should be submitted by December 1st.

The following material is required for consideration for admission:

- Completed application form and the nonrefundable application fee;
- Official transcripts for all undergraduate and graduate course work from all colleges and universities attended (Clemson University students need not send transcripts);
- Letters (two for Masters, three for PhD) of reference from faculty and/or employers;
- Recent GRE test scores for all students and, in addition, TOEFL or IELTS scores for international students.

Admission to a graduate engineering program is possible only after all required application materials have been submitted and reviewed. Admission to the Graduate School will be in one of the following categories:

- **Full Status.** The applicant's background and qualifications have been found to be acceptable for the graduate degree program.

- **Accepted Conditionally.** The final transcripts reflecting the degree awarded from the previous university hasn’t be submitted to the University, most likely because the applicant hasn’t yet graduated.

Under normal circumstances, a minimum of five weeks is required to review an application from a US citizen or resident for admission after all of the information has been received.

Under certain circumstances a student may be admitted to Clemson University as a non-degree student. Non-degree students who wish to obtain an advanced degree at a later date will have to submit another application for admission. Should such a student subsequently be admitted...
to a degree program, a maximum of 12 semester hours of credit may be applied to the degree. This includes transfer credit from other institutions.

**Academic Costs**
For current tuition costs, visit:
http://www.clemson.edu/cfo/receivables/sar/feesched.html

Graduate assistants pay a special flat rate per semester. This charge may be deferred in the regular semesters through payroll deductions. If you wish to find out more about academic costs, you may go to or call:

Student Accounts Receivables
G12 Sikes Hall, (864) 656-5592

**Financial Assistance**
The Civil Engineering Department awards assistantships involving instruction or research responsibilities to highly qualified applicants, including international students. Selection of assistantship recipients as well as notification of the appointment, its duration and the stipend is handled by the Department. Notification of acceptance into the Graduate School and award of an assistantship usually occur separately. It should be noted that graduate assistantships are awarded on a highly competitive basis, since the Department receives far more requests for financial assistance than available funds.

Financial assistance is available in the following forms: (1) Graduate Teaching Assistantships, (2) Graduate Research Assistantships, and (3) Fellowships. All applicants considered for assistantships when applications are processed. Award decisions are based on academic record, test scores, letters of recommendation and mutual interest.

**Graduate Teaching Assistantships** include both graders and laboratory assistants/instructors. These may be in the form of ¼-time (10 hours per week) or ½-time (20 hours per week) appointments.

**Graduate Research Assistantships** are generally made by individual faculty members to conduct research on specific projects. These may also be either ¼-time or ½-time appointments.

Research in the Department of Civil Engineering has being sponsored by:

- National Science Foundation
- Federal Emergency Management Agency
- Federal Highway Administration
- Construction Industry Institute
- South Carolina Sea Grant Consortium
- South Carolina Department of Transportation
- other federal, state, and industry organizations

Applicants can contact individual faculty for information and availability on research assistantship opportunities on their specific projects.

The Civil Engineering Department through external partnerships offers a number of fellowships to qualified graduate students. These are:

- The Kimley-Horn and Associates Graduate Fellowship
- The Walter P. Moore and Associate, Inc. Graduate Fellowship
- The SDL Structural Engineers Fellowship
- The Russell H. Brown – CCMA Masonry Fellowship
- The Aniket Shrikhande Memorial Graduate Fellowship and Assistantship
- The Civil Engineering Doctoral Department Fellowship

The Graduate School also awards a limited number of one-year fellowships to exceptional students on a highly competitive basis. Candidates for fellowships are nominated by faculty, and the Graduate School notifies students that they have received fellowships around the middle of the spring semester.

Fellowships are available from organizations outside Clemson University. Information on these fellowships may be obtained by contacting the organizations directly.

The Department of Civil Engineering also maintains a file containing external fellowship
opportunities. Fellowship opportunities available to graduate students in the Department of Civil Engineering include those from the following organizations:

- National Science Foundation
- Air Force Office of Scientific Research
- American Concrete Institute
- American Society of Civil Engineers
- Department of Defense
- Institute of Transportation Engineers
- Precast/Prestressed Concrete Institute
- Skidmore Owings and Merrill
- Structural Engineering Foundation
- and many others

Meeting South Carolina Residency Requirements
Many students are interested in establishing residency in South Carolina for the purpose of paying in-state tuition. The South Carolina residency laws call for a student to establish legal ties with the state; the student must wait one year before establishing legal ties with the state. Thus, you should take steps near the beginning of your program to initiate the process of becoming a South Carolina resident.

The legislation defining residency sets forth a fairly strict set of criteria for the administrative approval of residency requests. The Graduate School handles all the information regarding domicile requirements for residency status. Due to the frequency of changes implemented by the state legislature over the past years, the Graduate School does not distribute the Residency Application Forms to all the departments. If you are interested in establishing South Carolina residency, you should visit the Graduate School office to get this information and to pick up a Residency Application Form. All questions should be addressed to the Graduate School.

Enrolled Students

Checklist of Graduate School Procedures for Masters Students

- Attend orientation and informational meetings
- Attend GLA training session if you are teaching a lab
- Contact your initial advisor
  - Applied Fluid Mechanics—Dr. Khan
  - Construction Materials—Dr. Putman
  - Geotechnical Engineering—Dr. Ravichandran
  - Construction Eng. & Mgmt—Dr. Klotz
  - Structural Engineering—Dr. Atamturktur
  - Transportation Systems—Dr. Chowdhury
- Select an advisor and then an advisory committee
- Submit Graduate Degree Curriculum (GS2 form*) by the end of your first semester+
- Apply for candidacy for degree and order diploma (iRoar) at the beginning of the semester in which you plan to graduate+
- MS-Thesis students submit your completed thesis to your advisory committee and arrange for an oral defense by the committee + (you will need a GS7 form*)
- MS-Thesis students submit your thesis to the Manuscript Review Office+
- MS-Non-thesis students take a written exam in the middle of the semester in which you plan to graduate (you will need a GS7 form*)+
- Participate in an exit interview

*Visit [www.grad.clemson.edu/forms/index.php](http://www.grad.clemson.edu/forms/index.php) for forms

+For specific deadlines, visit the Graduate School: [www.grad.clemson.edu](http://www.grad.clemson.edu)

Checklist of Graduate School Procedures for Ph.D. Students

- Attend orientation and other informational meetings
- Attend GLA training session if you are teaching a lab
- Contact your initial advisor
  - Applied Fluid Mechanics—Dr. Khan
  - Construction Materials—Dr. Putman
  - Geotechnical Engineering—Dr. Ravichandran
  - Construction Eng. & Mgmt—Dr. Klotz
  - Structural Engineering—Dr. Atamturktur or Dr. Pang
  - Transportation Systems—Dr. Chowdhury
- Select an advisor and then an advisory committee
• Submit Graduate Degree Curriculum (GS2 form*) by the end of your second semester+
• Take the comprehensive exam within two years of entering the PhD program and no less than six months prior to your expected graduation date (you will need a GS5 form*)
• Apply for candidacy for degree and order diploma (iRoar) at the beginning of the semester in which you plan to graduate+
• Submit your completed dissertation to your advisory committee and arrange for an oral defense by the committee (you will need a GS7 form*)
• Submit your Dissertation to the Manuscript Review Office+
• Participate in an exit interview

* Visit www.grad.clemson.edu/forms/index.php for forms
+ For specific deadlines, visit the Graduate School: www.grad.clemson.edu

**Academic Advisory Committee**
As per graduate school regulations, “A minimum of three faculty members are to be selected by a student seeking a master's or specialist's degree, and a minimum of four faculty members are to be selected by a student seeking a doctoral degree. The majority of the advisory committee, including the major advisor, must be comprised of Clemson University faculty who hold full-time, tenure-track positions. Either the major advisor or at least half of the committee must hold rank in the program offering the degree. If a minor is declared, this area must be represented on the committee. Emeriti faculty may serve as advisory committee members but may not serve as chair of the advisory committee. Committee members of interdepartmental programs are to be appointed according to bylaws formulated by the program faculty and endorsed by the Graduate School that assure appropriate representation of the participating departments. Part-time visiting and other nontenure-track faculty employed by Clemson University may serve on the advisory committee but may not serve as chair. Persons not employed by the University may serve on the advisory committee; if they serve as one of the statutory members of the committee, they must be appointed to adjunct faculty status. All duly appointed committee members have full voting status on the outcomes of all examinations given by the committee. It is possible for co-chairs to direct the activities of the advisory committee. This special arrangement must be made with the consent of the dean of the Graduate School.”

**Degree Plan**
All students who are seeking a graduate degree must have a planned program of study (GS2 – see p. 16 for links to all GS forms) on file with the Graduate School. This plan represents the formulation of a student's curriculum as recommended and approved by the advisory committee. It must adhere to departmental as well as Graduate School policy. The degree plan normally should be submitted by the end of the first semester of enrollment in the program.

All course work, which is to be credited toward a Master's degree, including the design project or research thesis if required, must be completed within six calendar years prior to the date on which the degree is to be awarded. When recommended by the advisory committee, and approved by the graduate dean, as many as six semester hours of course work completed outside the six-year limit may be validated by a written examination administered by the department regularly offering the courses. Course work completed outside the six-year time limit at an institution other than Clemson University may not be transferred to Clemson University nor validated for graduate credit. The requirements for doctoral degrees must be completed within five years after successfully completing the comprehensive examination.

**Final Examination**
Each candidate for a graduate degree must pass a final examination administered by the student’s advisory committee. This exam is to be taken during in the semester in which the degree is to be awarded (See the Graduate School website for specific deadlines). The Graduate School must be notified of the time and place of the examination at least 10 days prior to the time scheduled.
The format of the final examination is dependent on the degree being sought by a student. The final examination policy for each degree is explained in subsequent sections describing the degree options. It is the responsibility of the student to meet all deadlines for graduation imposed by The Graduate School.

Within three days after the examination the chairman of the advisory committee will notify the Graduate School of the results using the appropriate form (GS7). A student who fails the final examination may be allowed a second opportunity only with the recommendation of the advisory committee. Failure of the second examination will result in dismissal from the graduate school.

**Application for Graduation**

Each graduate student must apply for graduation through iRoar (www.registrar.clemson.edu).

The deadline to apply for graduation can be found on the Graduate School website at http://www.grad.clemson.edu/deadlines.php. This site contains a comprehensive list of all relevant deadlines. There is not a fee for applying for graduation; however, persons applying and/or paying necessary fees (mailing fee) after the announced deadline dates will be assessed a late fee in the amount of $25 plus $5/day for every day thereafter.

**The Master of Science**

The Master of Science degree program prepares men and women to work at high levels of the engineering profession. The thrust of the program is the development of engineering solutions and developing technology to solve new problems. The program emphasizes engineering theory and research.

Graduates of the Master of Science program are prepared to move quickly into positions of leadership. Technical advances implemented through industry require direction by individuals who possess a strong technical background and also understand the implications of the solution. The Master of Science program prepares the student to meet these exciting challenges.

**Eligibility Requirements**

The Master of Science degree program is open to all individuals who have a four-year baccalaureate degree. A degree in engineering is not required for admission, but most entering students have an undergraduate civil engineering degree. The student’s academic and professional record should indicate the motivation for and the ability to complete a graduate degree in civil engineering. Neither an academic record that exceeds the minimum requirements, satisfactory scores on standardized tests, nor professional experience alone will assure a student's admission to the program. Rather the complete record of the student must indicate the likelihood of successful graduate study. The Clemson University Graduate School reserves the right to require additional quantitative and aptitude examinations as well as personal interviews and/or oral examinations prior to reaching an admission decision.

The grade point ratio representing an assessment of a student's undergraduate work will be based upon the last half of the course work listed on the transcript(s). In most cases this will be the full junior and senior years. As a minimum, 60 semester hours (90 quarter hours) will be examined. In no case will a partial term, session, or enrollment period be utilized. Excluded in the computation are courses graded pass/fail and certain electives having no relationship to the curriculum.

Normally a 3.0/4.0 grade point ratio and acceptable scores on the Graduate Record Examination are required for admission to the graduate program. However, an individual who has a lower grade point ratio may be admitted if he or she has significant industrial experience related to their proposed program of study. Individuals who feel that they are qualified for graduate study at Clemson University, but do not think they meet the admission requirements, should contact the department’s graduate program coordinator (ee_gpc@ces.clemson.edu) to discuss their particular situation.

**Degree Options**

There are two options available for students pursuing a Master of Science degree. The
student can prepare a research thesis or can take additional courses instead of completing a thesis.

The thesis option requires the preparation of a research thesis that is a part of the total credit hours required for the degree. Students who eventually intend to pursue a doctoral degree will usually choose the thesis option. Completion of a research thesis is excellent preparation for the research necessary for a doctorate if a student is inclined to pursue that degree in the future.

The non-thesis option does not require the preparation of a research thesis but does require completion of additional coursework. This degree option provides the student with additional directed study through coursework. Normally students pursuing the non-thesis option will not pursue a doctorate.

**Program of Study**
Except for the core courses required by different disciplines (see academic advisor for more information), there are no formal course requirements for students pursuing a Master of Science degree. The graduate degree program normally contains some engineering design and a minimum of ten semester hours of engineering science, advanced mathematics, and basic science. In addition, each student in the thesis option must complete an advanced research project.

When preparing the graduate degree plan, the student should determine his or her career goals and personal interests. The courses completed for the degree help the student to obtain these goals. The academic advisory committee can help the student selecting the courses that should be completed.

The final program of study must contain at least 30 semester hours of graduate credit including the core curriculum requirements. Of the required 30 hours, no more than six hours can be CE 891, Masters Thesis Research, for those students pursuing the thesis option. At least half of the non-thesis research hours must be for courses numbered 800 or above.

**The Research Thesis**
The purpose of the research thesis is to afford the student the opportunity to participate in specialized engineering research that can advance the state-of-art. The research is conducted under the direction of a member of the faculty who will normally serve as chairman of the academic advisory committee. The research should be sufficiently demanding technically so as to demonstrate the student’s ability to assimilate knowledge from several subject areas for the advancement of engineering knowledge.

A completed thesis must be prepared following the guidelines contained in this document and submitted to the advisory committee before the appropriate deadline.

**Final Examination**
The intention of the Masters degree final examination is to demonstrate an acceptable level of knowledge in the basic subjects leading to the Masters degree. In addition to determining a candidate’s technical knowledge, the examination also provides an opportunity to evaluate the candidate’s ability to synthesize and apply information from their graduate program into the solution of a problem.

**Non-Thesis Option**
The examination is an oral and/or written examination (or a combination of the two) consisting of questions related to fundamental knowledge in a student’s chosen area of concentration (i.e., applied fluid mechanics, construction materials, geotechnical engineering, construction engineering and management, structural engineering, or transportation systems). A student, in consultation with the advisory committee, will schedule the exam to occur around mid-semester of their final semester of coursework. A passing of this final examination is required in order for the M.S. degree to be awarded. If a student fails the examination, a retake opportunity upon the recommendation of the student’s advisory committee will be available prior to the end of the same semester. A student has a maximum of two opportunities to pass the oral examination.
Thesis Option: The examination is an oral examination consisting of a student’s M.S. thesis defense and questions related to fundamental knowledge in a student’s chosen area of concentration (i.e., applied fluid mechanics, construction materials, geotechnical engineering, construction engineering and management, structural engineering, or transportation systems). The student’s advisory committee will administer this oral defense/examination. A passing of this oral defense/examination is required in order for the M.S. degree to be awarded. If a student fails the defense/examination, a retake opportunity upon the recommendation of the student’s advisory committee will be available. It is the responsibility of each student to schedule the oral defense/examination and meet the Graduate School’s deadlines for graduation. A student has a maximum of two opportunities to pass the oral defense/examination.

The Doctor of Philosophy
The Doctor of Philosophy degree program prepares men and women to work at highest levels of the engineering profession. The thrust of the program is the development of engineering solutions and developing new technology to solve new problems. The program emphasizes engineering theory and research.

Graduates of the Doctor of Philosophy degree program are prepared to move quickly into positions of leadership in academia and industry. Technical advances require direction by individuals who possess a strong technical background and also understand the implications of the solution. The Doctor of Philosophy degree program prepares the student to meet these exciting challenges.

Eligibility Requirements
The Doctor of Philosophy degree program is open to all individuals who have a baccalaureate degree and preferably a Master’s degree in engineering. The student’s academic and professional record should indicate the motivation for and the ability to complete a graduate degree in civil engineering. Neither an academic record, which exceeds the minimum requirements, satisfactory scores on standardized tests, nor professional experience alone will assure a student's admission to the program. Rather the total record of the student must indicate the likelihood of successful graduate study. The Clemson University Graduate School reserves the right to require additional quantitative and aptitude examinations as well as personal interviews and/or oral examinations prior to reaching an admission decision.

Program of Study
Except for the core courses required by different disciplines, there are no formal course requirements for students pursuing a Ph.D. degree. However, each student must complete a minimum of 30 credits, including 18 hours of dissertation research.

When preparing the graduate degree plan, the student should determine his or her career goals and personal interests. The courses completed for the degree help the student to obtain these goals. The academic advisory committee can help the student selecting the courses that should be completed.

The Research Dissertation
The purpose of the research dissertation is to afford the student the opportunity to participate in independent specialized engineering research that can advance the state-of-art. The research is conducted under the direction of a member of the faculty who will normally serve as chairman of the academic advisory committee. The research should be sufficiently demanding technically so as to demonstrate the student’s ability to assimilate knowledge from several subject areas for the advancement of engineering knowledge.

Doctoral Examinations
Student Evaluation: During the first two semesters in residence, a Ph.D. student must select a faculty advisor. The faculty advisor may assign the student specific duties, outside normal coursework requirements, that include but are not necessarily limited to, preparing research proposals and literature surveys, conducting classroom lectures, formulating computer
models, and executing data collection and analysis. The advisor may, at any time, withdraw as the student’s faculty advisor if these assigned duties are not performed consistent with the expectations of the faculty advisor. During this initial two-semester period, an advisor should make a determination as to whether a student is capable of completing the requirements for a Ph.D.

**Comprehensive Examination:** The Ph.D. comprehensive examination is generally scheduled after all coursework has been completed (Form GS2 has been filed with the Graduate School) and the dissertation proposal is ready for approval by a student’s graduate committee. The examination therefore consists of two parts: (1) a written and/or oral examination by the advisory committee on the student’s preparation to complete the proposed research and (2) presentation of the proposed research. Typically, the two parts of this examination will not occur at the same scheduled meeting of the advisory committee. The Ph.D. comprehensive examination should be completed within two years of entering the Ph.D. program. The written and/or oral examination may include consideration of graduate course work, preliminary research, and/or other demonstration of the ability to conduct the proposed research. The result of the Ph.D. comprehensive examination is reported to the Graduate School on Form GS5. After passing this examination, a student is officially admitted to candidacy for the Ph.D. degree.

**Dissertation Defense:** As required by the Graduate School, the candidate for the Doctor of Philosophy degree must pass a final oral examination (dissertation defense). The student’s graduate advisory committee will conduct the examination and all members of the faculty are invited to participate. The examination consists of a presentation of the student’s doctoral research and an assessment by the committee of the research approach, the significance of the findings, and the contribution to the advancement of civil engineering.

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**Course Offerings**
For a complete and current list of course offerings, see the graduate catalog at [http://www.grad.clemson.edu/catalog/](http://www.grad.clemson.edu/catalog/).

**Facilities/Resources**

**Student Lounge**
Room 121 on the 1st floor of Lowry Hall is a lounge for Civil Engineering. The lounge is equipped with vending machines, several couches, a refrigerator, and a microwave.

**Graduate Student Mailboxes**
Departmental mailboxes for graduate students are located on the 1st floor of Lowry Hall in room 123. It is a good idea to check your mailbox frequently so that you do not miss any information or departmental events.

**Graduate Student Computer Account**
It is vital that you check your Clemson University computer account so that you can get email from your department, professors, and classmates. You will also use your account for on-line registration. Upon enrolling in Clemson, all students are issued a userid to access the University computer system.

**University Services**

**Bursar’s Office**
The Bursar’s Office is normally where students pay fees and bills. For more information, call The Bursar’s Office (864) 656-5592.

**Career Center**
The Michelin Career Center coordinates campus visits for hundreds of representatives from business, industry, and government who are interviewing graduate students for permanent employment and summer internships. Recruiters are scheduled from September through April. The Clemson University career placement system allows students to research employers and sign up for interviews from any campus terminal connected to the mainframe. Graduate students are encouraged to attend seminars on writing resumes, interviewing and job-search
techniques. Individual career counseling and a computer-assisted career information system are available. If you would like more information, or if you would like to use the services the Michelin Career Center offers, you can visit the Michelin Career Center at room 316 in the Hendrix Center or call (864) 656-6000.

**Clemson Area Transit (CAT)**
The University and City of Clemson operate a bus system that provides transportation for students to destinations both on and off-campus. For more information about CAT, call (864) 654-CATS (864-654-2287). You may also visit their web site, which contains schedules and maps for CAT at [http://www.catbus.com/](http://www.catbus.com/).

**Computer Access**
Clemson Computing and Information Technology (CCIT) is the primary supplier of computer and technological services for Clemson University. CCIT operates a variety of labs across the university. Popular labs are located in the following buildings:

- 11 Lowry Hall
- Brackett Hall Atrium
- Cooper Library
- M1 Martin Hall
- 101 & 103 McAdams Hall
- 140 & 145 Sirrine Hall

In addition to the computing facilities, CCIT operates a Help Desk to assist University faculty, staff, and students in the use of the Computer Center’s hardware and software. When you have questions, you may contact:

CCIT Help Desk
M3 Martin Hall
656-3494
ITHELP@clemson.edu

For more information concerning CCIT and the services it offers, you can visit the CCIT homepage at [http://www.clemson.edu/ccit/](http://www.clemson.edu/ccit/).

**Counseling and Psychological Services**
The Counseling and Psychological Services (864-656-2233) offers services free of charge to all students enrolled full-time. All information is kept confidential. They offer individual counseling, and self-help groups, among other services. Areas of focus include personal issues, academic concerns, and self-management.

The Counseling Center sponsors seminars and workshops on various topics such as racism, sexism, couples communication, etc. If you or someone you know needs help after hours, call the Redfern Help Center (864-656-2451). Redfern has a psychiatrist trained to deal with crises and emergency situations; the psychiatrist can be reached anytime, day or night.

**Getting Around Campus**
If you are new to campus and would like to have a map to provide you direction, a map may be obtained at the University Visitor’s Center, located next to the Alumni Center off of Highway 93. The Center offers a full range of services, including general information, audio-visuals, guided tours and other special orientation programs, publications, and displays to welcome visitors and to introduce them to the University. Call (864) 656-4789 for information on hours and other details. You can also download a campus map at the following: [http://www.clemson.edu/campus-map/](http://www.clemson.edu/campus-map/).

**Student Disability Services**
The Office of Student Disability Services works with students with identified disabilities to develop strategies and to offer accommodations both in and out of the classroom to help enhance the Clemson experience. For more information about the services provided, call 864-656-6848, or visit [http://www.clemson.edu/campus-life/campus-services/sds/](http://www.clemson.edu/campus-life/campus-services/sds/).

**Health Insurance**
Clemson University has always strongly recommended that all students have health insurance to ensure access to high quality and reliable health services and to offer a buffer against devastating medical costs for serious illnesses, injuries or hospital visits. All full-time graduate students (enrolled in nine or more credit hours on campus) and all international
students are required to have health insurance coverage. If you are in this category, the premium for the Student Health Insurance Plan will be included with tuition and fees for the fall and spring semesters (the fee for spring includes coverage for the summer). Students who pay the billed premium are automatically enrolled in the Student Health Insurance Plan unless a waiver is submitted and approved of comparable or better alternate health coverage. For more information about graduate student health insurance, visit http://www.clemson.edu/campus-life/campus-services/redfern/insurance/.

Housing
New graduate students may be housed on campus as space permits. The University has a small community of two-person apartments in Thornhill Village for unmarried graduate students. In addition, single graduate students may request to live in other areas on campus, as space permits. For more information, call the Housing Office at (864) 656-2295.

The Clemson area offers students a number of off-campus housing choices in a wide range of prices. Consult a local realtor for options or more information. Some apartments do not include utilities (electric, water, phone, cable) as part of the lease agreement. You may need to make arrangements to have services connected by contacting the utility companies directly.

Legal Services
All Clemson students are eligible to receive one legal aid voucher per semester. Each voucher entitles the student to one-half hour consultation with a lawyer off campus. Time cannot be accumulated. Please contact the Student Government Office at 864-656-2195 for further details.

Multicultural Programs and Services
Multicultural Programs and Services coordinates and implements comprehensive educational, cultural and social programs designed to foster intercultural and cross-cultural awareness and understanding. This mission is accomplished through a combination of programs and services that promote Cultural Awareness, Leadership Development, Multicultural Education and Retention. For more information, contact the Office of Multicultural Affairs in Room 214 of the Hendrix Student Center or call (864) 656-7625.

Parking Information
For those who have cars, parking is available on campus in designated areas. Space is limited, and you may find that you have to park very far from where you wish to go. If you have a car, you should contact the Department of Parking Services (864-656-2270). You must pay a parking fee for on-campus parking, at which time you will be given a decal for your car. The Department of Parking Services will provide you with a map that contains detailed information on student parking.

Postal Services
The campus post office, University Station (864-656-2351) is located on the lower level of the Student Union. The City of Clemson Post Office (864-654-2531) is located on College Avenue. Clemson area Zip Codes are:

Town: 29631
University Station Post Office: 29632
Main Post Office: 29633
Clemson University offices: 29634

Public Safety and Security
The Clemson University Police Department is entrusted with the demanding responsibility of providing a safe and secure living, working, and learning environment for Clemson University. This is accomplished through several activities undertaken by law enforcement professionals and support personnel. Police patrol all campus areas with primary concern for the personal safety of all our students, staff, and faculty; our secondary concern is the prevention of thefts. Patrol officers also respond to alarms and other requests for assistance. Please stop by the Police Department at Gate 10 of Memorial Stadium or call (864) 656-2222 if you need assistance.

Campus Recreation
Fike Recreation Center is located on Williamston Road. Fike houses state of the art
facilities, including an indoor walk/jog/run track; the Swann Fitness Center; a natatorium featuring a 25-yard pool; a climbing wall and many other opportunities for students, employees and the Clemson community. Students who pay full-time tuition and University fees for the semester may use the facilities without additional charge by presenting their University ID. Part-time students may use the facilities for $50 per fiscal year (July 1 to June 30) or $25 per half year. Students enrolled in a summer session may pay $25 per session for use of the facilities.

For more information about Fike, visit http://www.clemson.edu/campus-life/campus-recreation/facilities/.

Tiger 1 Card
All students are required to obtain a Tiger 1 Card upon enrolling in Clemson. The Tiger 1 Card is your official university ID and so much more. Review the list below to learn more about what your Tiger 1 Card can do:

- Personal student identification card
- Personal debit card to access pre-deposited funds in a TigerStripe account
- Meal plan card
- Library card
- Residence hall access card
- Fike Recreation Center access card
- Athletic ticket privilege access

For more information about the Tiger 1 card, call (864) 656-0763, or visit http://www.clemson.edu/campus-life/campus-services/tiger1/.

University Bookstore
The Bookstore is located in the Hendrix Student Center. It stocks all required textbooks and supplies as specified by the various departments, as well as general trade books, greeting cards, computer software, personal care items, etc. The Bookstore holds textbook buybacks year-round. There is also an off-campus bookstore located in downtown Clemson on College Avenue.

Redfern Health Center
Redfern Health Center provides health services to University students. The Student Health Center offers a variety of services including: outpatient ambulatory care for illnesses and injury, health education on women’s health issues, nutritional counseling, dermatology, and orthopedic clinics. The center operates Monday through Friday from 7:30 am to 5:00 pm. Physician care is available Monday through Friday from 8:00 am to 5:00 pm. Students are seen at Redfern throughout the day by appointment. A walk-in clinic is available to those students who do not have an appointment. ASK-A-NURSE telephone services are available Sundays from 4:00 pm to 8:00 pm, and Monday through Thursday from 5:00 pm to 8:00 pm.

All graduate students living in University residence halls (irrespective of their enrollment), all graduate students enrolled in 9 or more semester hours who pay the full-time rate (irrespective of their residence), and all international graduate students are required to pay the university medical fee each semester. The medical fee (summer session fees are prorated) covers the services of the university physicians, nurse practitioners, nursing staff, and supports, in part, psychologists in the Counseling and Psychological Services Department (CAPS).

If you have questions about services provided by Redfern or about the medical fee, you may call Redfern Health Center at (864) 656-2233; if you would like to schedule an appointment to see a doctor at Redfern, you may call the appointment line at (864) 656-1541.

University Libraries
The Robert Muldrow Cooper Library is the main library at Clemson University. It serves all students, faculty and staff, as well as visitors from the Clemson community. The library contains over one and a half million volumes of books, journals, and documents. The library provides maps to assist students in finding the location of the materials they need. In addition, the library contains a number of copiers, two in the reference area, and several on the ground
floor. For more information about the library, you may call (864) 656-3024.

See the following for information for the library’s hours of operation:

http://www.clemson.edu/library/hours.html

There are also two satellite branches. The Emery A. Gunnin Architectural Library, located in Lee Hall, provides materials on architecture, visual arts, city and regional planning, building science and construction, and landscape architecture. Its extensive slide library can also be helpful to those interested in history, art, etc. The Library’s Special Collections unit, housed in the Strom Thurmond Institute, contains rare books, manuscripts of prominent South Carolinians, and materials relating to the history of Clemson University and South Carolina. A smaller, specialized collection is also located in the Chemistry Library in Hunter Hall.

**Student Organizations**

Most student organizations in our Department are open to graduate students. Depending on your interests, many are excellent ways to network and develop your career. For a current list, visit:

http://www.clemson.edu/ce/students/student.html

Clemson University also has many organizations, each designed for sharing special interests such as fine arts, social, religious, service, media, military, honorary, professional, and sports interests. No matter what your interest or hobby, you can find a group that shares your enthusiasm. For a list of student clubs and organizations, visit:

http://www.clemson.edu/campus-life/student-orgs/

**Reference Material**

**Calendars**

Academic Calendar:
http://www.registrar.clemson.edu/html/Acad_Cal.htm

University Master Calendar:
http://calendar.clemson.edu/

**Web Sites**

Clemson University:
www.clemson.edu

College of Engineering and Science:
http://www.clemson.edu/ces/

Department of Civil Engineering:
http://www.clemson.edu/ce/

Graduate School:
http://www.grad.clemson.edu/index.php

**Graduate School Forms**

Graduate Students are required to submit the following Graduate School (GS) forms. These and all other GS forms can be found on the Graduate School website at:

http://www.grad.clemson.edu/Forms.php

GS2 (Plan of Study):
http://www.grad.clemson.edu/forms/pdf/GS2_fillable.pdf

GS5 (Results of the Doctoral Degree Comprehensive Exam):
http://www.grad.clemson.edu/forms/pdf/GS5d.pdf

GS7 (Final Comprehensive Examination Form for M.S. students):
http://www.grad.clemson.edu/forms/pdf/GS7M.pdf

GS7 (Final Comprehensive Examination Form for Ph.D. students):
http://www.grad.clemson.edu/forms/pdf/GS7D.pdf
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Last updated: September 30, 2013