General Information

Introduction
The biosystems engineering graduate program within the EEES department is designed to prepare graduates for leadership, creative accomplishment and continued professional learning, and to prepare graduates to effectively conduct independent scientific research related to sustainable biological systems design.

Students from all engineering disciplines are encouraged to apply. Applicants from non-engineering disciplines are welcome, but may be required to take additional undergraduate courses. Each degree program is planned individually to augment the student's previous engineering and science background with adequate breadth in engineering and specialization in an area of biosystems engineering including bioprocessing and ecological engineering. In addition to biosystems engineering, course work includes mathematics, physics, chemistry, statistics, and biological and engineering sciences.

Our Students
Graduates from the BE program find employment in biofuels, biopharmaceutical and bioprocessing plants or biorefineries, engineering consulting firms, state and federal government agencies, and academia.

Admission requirements:
For admission to the M.S. or Ph.D. program, an applicant should have a grade point ratio/average (GPR/GPA) of at least 3.0 out of 4.0. Ranges of scores for students admitted to the BE program on the Graduate Record Exam (GRE) are typically greater than 700 Q, 400 V and 3.0 A. Students with a baccalaureate or masters degree in a related science or engineering field may apply directly to the PhD program. Students with exceptional records and experience in research will be considered for the PhD degree without a master's degree, while most students admitted to the PhD program will have previously received a Masters degree.

Required documents include:

- Online Application
- Official GRE scores
- Official TOEFL/IELTS scores for International Students
- Official Transcript
- Letters of Recommendation (2 for MS; 3 for PhD)
Mail all documents to:
Office of Graduate Admissions
E-209 Martin Hall
Clemson, SC 29634

For admission to the Ph.D. program, the applicant must have a faculty member who has agreed to be the research advisor before final admission. Pursuit of a PhD degree is a significant commitment of time and effort. Applicants should communicate with professors who are engaged in research of interest to the applicant. Finding a research advisor who will guide the PhD student effectively is important within the first semester of study. Visit the web page of each professor and send email to those who are involved in areas of interest. For questions about this process, contact the Graduate Program Coordinator. Students with a baccalaureate or masters degree in a related science or engineering field may apply directly to the PhD program. Students with exceptional records and experience in research will be considered for the PhD degree without a master's degree, while most students admitted to the PhD program will have previously received a Master’s degree.

Applicants may apply on the Web at http://www.grad.clemson.edu/admission/. Applications should be received no later than five weeks prior to registration. Every required item in support of the application must be on file by that date. Prospective students are encouraged to complete and submit their applications for admission and financial assistance as early as possible to be considered during the first round of assistantship awards, which are made beginning in February or March. Applicants whose credential files are not completed until after this first round of assistantship awards will be considered for awards in subsequent rounds after April 15.

Course of Study

Remedial coursework:
Students from a non-engineering background or who have not yet taken the following remedial courses must complete these requirements:
1. Basic math courses through differential equations (MTHSC 106, 108, 206, 208)
2. Freshmen chemistry course with lab and biology course with lab (or Advanced Placement (AP) credit)
3. Statics

BS/MS program requirements: Students enrolled in the undergraduate BE program at Clemson University can apply for acceptance to BS/MS programs in Biosystems Engineering. This allows students with Junior status to count 6 – 8 credits of undergraduate course credits as part of graduate coursework. Requires 700Q, 500V, 4.0 GRE and 3.4 GPA.
MS program requirements (30 credit hours):
Course work for the Master of Science (M.S.) degree program in biosystems engineering (BE) can be completed in three semesters (about sixteen months). An oral defense is required for the thesis.

1. A minimum of 24 hours course credits with one-half at 800 level or above, and 6 credit hours of thesis research
2. Nine (9) credits of coursework with engineering rubric (excluding special topics courses).
3. Experimental Statistics (EXST 801)
4. Three (3) credits of additional coursework that emphasizes advanced mathematics – may be Mathematics (e.g. MTHSC 634), Engineering (e.g. Finite elements or computational mechanics) or Experimental Statistics (e.g. EXST 805).
5. Newman Seminar (BE 651) and EES 861 (to be taken every semester except when taking BE 651)
6. Submission of one manuscript to a peer-reviewed journal before advisor signs thesis defense and approval form (Form GS7M)
7. Maximum of 3 credits of special topics (regardless of rubric) may be counted toward MS program.
8. All Clemson Graduate School rules must be followed in a timely sequence including timelines for required GS forms (e.g. GS2, GS7, etc.). Research proposals are due to the graduate committee within the first year of study and a copy must be submitted for EEES records.

Ph.D. program requirements:
The Ph.D. in Biosystems Engineering program at Clemson University can be completed in three to five years and is flexible, with each student’s specific program uniquely tailored by the student and the committee. Comprehensive examinations, written and oral, occur after completion of course work and after formulation of the dissertation research proposal, respectively. A dissertation defense is required prior to approval and acceptance of the completed work. If directly acceptance into the Ph.D. program without first obtaining an M.S. degree, then all M.S. requirements must be taken in addition to those listed for Ph.D. accounting for a total of 63 credit hours.

1. A minimum of 15 credit hours of graduate courses with one-half at 800 level or above, and at least 18 credit hours of dissertation research.
2. Three credits in Experimental Statistics
3. Newman seminar (BE 651) and EES 861 (to be taken every semester except when taking BE 651)
4. Submission of 2 manuscripts to peer-reviewed journals before advisor signs dissertation defense and approval form (Form GS7D)
5. Maximum of 3 credits in special topics (regardless of rubric) may be counted toward Ph.D. program.
6. All Clemson Graduate School rules must be followed in a timely sequence including timelines for required GS forms (e.g. GS2, GS7, etc.). Research proposals are due to the graduate committee within the first year of study and a copy must be submitted for EEES records.
Financial Aid
To see the proposed Graduate Tuition Rates for this academic year, **click here.**

The BE Program within the EEES Department offers a number of graduate assistantships to students each year based on merit. These are offered in the form of stipends and the additional benefit of tuition remission. Students must be enrolled in a minimum of 9 credit hours per semester to qualify for a graduate assistantship and must work a minimum of 10 hours a week as a teaching or research assistant or perform other tasks assigned by the School. Applications and accompanying materials must be received before February 15\(^{th}\) to be considered automatically for an assistantship and before January 15\(^{th}\) for some fellowships.

Financial aid is available on a competitive basis to both national and international students in the form of teaching and research assistantships, which require up to 20 hours of work per week. Full stipends range from about $17,700 to $19,200 annually, depending on degree program. Graduate assistants pay reduced tuition; an allowance for tuition and fees is included in the annual stipend. Faculty members are currently looking to fill assistantship positions for a variety of projects.

For additional information, please contact the BE graduate program coordinator (Terry Walker)

**ACADEMIC INTEGRITY, GRADUATE PHILOSOPHY**

An academic environment of integrity is one in which students, faculty and staff interact with each other from a position of mutual trustworthiness. As a member of the consortium of institutions comprising the Center for Academic Integrity, Clemson University has committed itself to preparing a community of scholars dedicated to integrity in teaching, research, scholarship, mentorship and the acquisition and display of professional values of trust, honesty, fairness, responsibility and respect. It is an expectation that Clemson graduate students avail themselves of the many opportunities and resources both on and off campus to learn how to engage in professional practice with integrity. The Graduate School and the community of scholars engaged in graduate-level education will vigorously and expeditiously respond to charges of violations of academic integrity.

For further information, refer to [http://gradspace.editme.com/AcademicGrievancePolicyandProcedures#integritypol](http://gradspace.editme.com/AcademicGrievancePolicyandProcedures#integritypol).