



Graduate Student Handbook

Website: www.uky.edu/bae
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 College of Agriculture,
Food and Environment
Biosystems and Agricultural Engineering

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WELCOME TO THE BIOSYSTEMS AND AGRICULTURAL ENGINEERING GRADUATE PROGRAM

We're glad you're here.

This handbook has been prepared to assist **prospective graduate students** in navigating the application process and **admitted graduate students** in planning a course of study and to keep track of their progress for the Biosystems and Agricultural Engineering (BAE) Graduate Program. It also outlines many departmental policies relevant to graduate students. This handbook is intended to be used only as a supplement to the *University of Kentucky Graduate School Bulletin*. The *UK Bulletin*, among other important information, contains statements of official academic policy regarding current courses and graduation requirements. The *UK Bulletin* is the authoritative source of information for all graduate students.

This handbook should be retained throughout the student's stay in the department, and it should be used in conjunction with consultation of the student's faculty advisor.

Please keep in mind that while intended to be a helpful resource to students, this handbook is not a substitute for meeting with the student's faculty advisor, the advisory committee, or a replacement for the information found in the *UK Bulletin*. The most recent version of this handbook is available on the BAE website. Students are encouraged to contact their faculty advisor whenever they have questions about the program, the College, or the University.

The faculty and staff of the Department of Biosystems and Agricultural Engineering look forward to working with you while you pursue your goal of earning a graduate degree from UK in biosystems and agricultural engineering.

The Department of Biosystems and Agricultural Engineering offers Master of Science (Thesis and Non-Thesis options) and Ph.D. programs.

Department Contacts

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Department website: www.uky.edu/bae

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NAVIGATING THE APPLICATION PROCESS

Interested in obtaining a graduate degree from BAE?

Our department requires incoming graduate students to have identified a faculty advisor who is willing to guide the student's graduate program. Prospective students are therefore expected to identify a faculty member with similar research interests and contact that faculty member directly to determine whether they are taking on new graduate students during the semester in which the student would like to enroll.

If the faculty advisor is interested in advising a new student, we encourage the student to visit the department or, at a minimum, participate in a video call with their prospective advisor before applying to the department. We also host a yearly Graduate Student Recruitment Event in late January/early February, which is an excellent opportunity to interact with several potential faculty advisors.

Graduate Faculty Research Areas

Dr. Akinbode Adediji	Food Process Engineering
Dr. Carmen Agouridis	Bioenvironmental
Dr. Tyler Barzee	Food and Bioprocessing
Dr. Don Colliver	Controlled Environment
Dr. Czar Crofcheck	Bioprocessing
Dr. Joe Dvorak	Machine Systems Automation
Dr. Bill Ford	Bioenvironmental
Dr. Morgan Hayes	Controlled Environment / Livestock Systems
Dr. Josh Jackson	Controlled Environment / Livestock Systems
Dr. Sam McNeill	Bioprocessing
Dr. Tiffany Messer	Bioenvironmental
Dr. Michael Montross	Bioprocessing
Dr. Sue Nokes	Bioprocessing
Dr. Mick Peterson	Biomechanics
Dr. Wayne Sanderson	Agricultural Safety, Public Health
Dr. Michael Sama	Machine Systems Automation
Dr. Jian Shi	Bioprocessing
Dr. Tim Stombaugh	Machine Systems Automation

Admission to the BAE Graduate Program

The prospective student must apply to the Graduate School through the online application system found on the [Graduate School's website](http://gradschool.uky.edu/), <http://gradschool.uky.edu/>.

The Application

To apply, you will need:

- **A resume or curriculum vita (CV)**
- **A personal statement** - The personal statement should address the reason(s) for pursuing a graduate degree in your area of interest, outline any relevant previous work or research experience (if applicable), and indicate whether a faculty advisor has been contacted and/or identified.
- **All transcripts** - You will be asked to upload copies of transcripts from all higher education institutions attended and, in the case of domestic students, to self-report cumulative GPAs for each institution. **The BAE program requires an overall undergraduate grade point average of 2.80 (see exceptions sidebar) and 3.00 on all graduate work.** If you are admitted and decide to enroll, you will then be required to submit official transcripts to the Graduate School.
- **Test scores** - In most cases an official test score (either GRE or GMAT) is required for admission (see exceptions sidebar). You will be asked to self-report these scores or supply a future date for taking the test on the application. We also require official scores from the reporting agency. The BAE program does not have a set minimum GRE score. We use this score as one piece of information among many to select students.
- **TOEFL or IELTS scores** - All applicants whose native language is not English will be asked to self-report one of these scores on the application. As with GRE or GMAT scores, we also require official language scores be sent to UK directly from the reporting agency. For the Graduate School, the minimum acceptable TOEFL score is 550 (paper-based), 213 (computer-based), or 79 (internet-based). The minimum IELTS score is 6.5. The BAE program requires a minimum TOEFL score (internet-based) of 94 or an IELTS score of 7.0. Submitted scores must be no more than two years old.

GRE scores should be sent directly to us from Educational Testing Service (ETS); the Institution Code for the GRE for UK Graduate School is **R1837**.

Scores for the Graduate Management Admission Test (**GMAT**) should be sent directly to us from the Graduate Management Admission Council (GMAC); the UK Graduate School code is **1837**.

- **Letters of recommendation** - The BAE program requires three (3) letters of recommendation, preferably from people who know you well and can speak to your academic potential. You will be asked for the recommenders' contact information and the application management system will send a request directly to the person.

Once the application is complete, the BAE Director of Graduate Studies (DGS) asks the Research and Graduate Studies Committee to review the application.

Exceptions: Provisional graduate admission status may be recommended by the Director of Graduate Studies in BAE for one or more of the following reasons:

- Missing transcripts or other requirements for admission such as letters of recommendation;
- Temporary waiver of the Graduate Record Examination (not to exceed one semester);
- Students with degrees in a field other than engineering;
- Deficiencies as determined by the Director of Graduate Studies;
- Students with an undergraduate GPA less than 2.8.

The Selection Process

The BAE Department's Research and Graduate Studies Committee (RGSC) reviews all applications to evaluate the applicant's probability for success in the BAE Graduate Program. The following items are taken into consideration:

- ☒ The applicant's previous academic record. Grades in science and math courses carry additional weight.
- ☒ Letters of recommendation.
- ☒ All applicable test scores.
- ☒ The availability of a faculty advisor and funding for the prospective student.

If the RGSC agrees that the applicant meets the selection criteria, the Director of Graduate Studies formally recommends to the Graduate School that the applicant be accepted into the BAE Graduate Program. The University of Kentucky Graduate School will then evaluate the student's application to ensure that all Graduate School entrance requirements are met.

Once the Graduate School has approved acceptance, the BAE Department is notified. The student will receive an official offer letter from the BAE Department Chair detailing the conditions of the student's admittance to the program, and if applicable, the financial aid available. Acceptance into the UK Graduate School does not guarantee an official offer from the BAE Department. **Admission into the BAE Graduate Program is a two-step process - the successful applicant will receive a letter of acceptance from the UK Graduate School AND an official offer letter from the BAE Department Chair.**

Upon receipt of an official offer letter from the BAE Department Chair, the student confirms their desire to attend graduate school by an email of acceptance to the BAE Department Chair.



Student contacts and identifies potential faculty advisor



Student submits application to the UK Graduate School



RGSC reviews application and provides recommendation of acceptance to the DGS



DGS provides recommendation of acceptance to the Graduate School



Graduate School reviews the application to ensure minimum requirements are met



Student receives notification of acceptance from the Graduate School



BAE Department Chair extends official offer letter to applicant



Student accepts offer

Funding: Research Assistantships and Teaching Assistantships

Research Assistants (RA) receive a stipend, distributed over 12 months, and have their tuition paid. Certain fees are the responsibility of the student as described on the graduate school website under Tuition Scholarship/Billing Account Information at:

<http://gradschool.uky.edu/tuition-scholarship-information>. In return, RAs are expected to work on research as assigned by the faculty advisor an average of 20 hours per week. The 20 hours per week assigned by your advisor may be related to your research but does not need to be. RAs are typically in the department during working hours (8 AM - 5 PM) to conduct their research and the assigned duties from the advisor. It is recommended that most lab work occur from 8 AM - 5 PM due to availability of staff and safety considerations. RAs work on the University calendar (University holidays plus 10 paid vacation days), not the academic calendar. Occasionally an RA will be requested to assist with a class to allow the student to gain teaching experience. Stipends are awarded for a maximum of two (2) years for an M.S.

student and three (3) years for a Ph.D. student. Exceptions to the stipend duration must be approved by the DGS and Department Chair.

Teaching Assistants (TA) receive a stipend, distributed over 12 months, and have their tuition paid. Certain fees are the responsibility of the student as described on the graduate school website under Tuition Scholarship/Billing Account Information at:

<http://gradschool.uky.edu/tuition-scholarship-information>. In return, TAs are expected to teach a section of a course, including grading and interacting with students. TAs are paid only during the semesters in which they teach. The BAE department does not offer teaching assistant support.

Obtaining a Research Assistantship

Two types of research assistantships are available: grant-funded and department-funded. The faculty advisor distributes grant-funded assistantships, so the advisor is the first person to ask about potential support. The department may have some competitive assistantships for students whose faculty advisor does not have grant-funded assistantships available. To qualify for the departmental research assistantships, you must have submitted your completed application by **March 15th for Fall semester** admission, and by **August 22nd for Spring semester** admission. Exceptions may exist, so please talk to the Department Chair if you have missed these deadlines. Students will be notified as to whether they will be receiving a departmental assistantship before May 1st and October 15th for Fall and Spring semester admission, respectively.

Stipend Amounts Available

The minimum research assistantship offered by BAE is \$20,000 per year for an M.S. student and \$22,000 per year for a Ph.D. student, paid bi-weekly. If the stipend is supported by grant funding the amount may be greater, depending on the amount of money available.

Competitive fellowships are available to supplement or substitute for an assistantship, both at UK and from federal agencies; however, the student is responsible for pursuing these options. There can be other impacts related to tuition expenses. Students with undergraduate degrees other than engineering must have completed all Tier 1 courses (described below) prior to being eligible for departmental assistantship.

Undergraduate Degrees Other Than Engineering

Students who enter an M.S. or Ph.D. program but do not have a B.S. degree in an engineering discipline (or equivalent coursework as determined by the BAE Department's RGSC) are required to complete a program of coursework that will provide them with a baseline of knowledge and competencies that are consistent with B.S. engineering graduates.

***Note:** Before you embark on Tier 1 courses, it is essential that you have a written commitment from a faculty member in the department that they are willing to serve as your major advisor once you have completed your Tier 1 courses.

Tier 1 Required Courses

The courses listed in the Tier 1 box (totaling 32 credit hours) constitute the baseline coursework required of non-engineering students. These courses do not count toward the student's graduate degree coursework.

Tier 2 Required Courses (Choose Five of the Seven)

Working in conjunction with the major advisor, the student will also select the most relevant five courses from the courses in the Tier 2 box. Advisors and advisory committees may also require additional courses as deemed appropriate. These courses do not count toward the student's graduate degree coursework.

Tier 1 Courses		Tier 2 Courses	
Course	Credits	Course	Credits
College Calculus 1	4	Statics	3
College Calculus II	4	Mechanics of Deformable Solids	3
College Calculus III	4	Dynamics	3
Differential Equations	3	Thermodynamics	3
General College Chemistry I	4	Heat Transfer	3
General College Chemistry II	3	Fluid Dynamics	3
General University Physics I	4	Electrical Circuits and Electronics	3
Physics I Laboratory	1		
General University Physics II	4		

Credit for Prior Undergraduate Coursework

The BAE Department's RGSC determines credit for prior undergraduate coursework. The RGSC will review the student's transcript for equivalent Tier 1 and Tier 2 courses. Courses judged equivalent will be used to fulfill the corresponding baseline requirements, and the student will not be required to retake those courses. The student is responsible for providing course catalogs or other material required by the RGSC to assess equivalence. The RGSC will include the results of their assessment with their admission recommendation to the Director of Graduate Studies (DGS) (see included worksheet - Appendix I).

Transferring Graduate Credits to UK

A maximum of nine (9) semester hours or twenty-five percent (25%) of the semester hours required for the degree concerned, whichever is greater, of regular graduate course credits completed at an accredited university, may be credited toward the minimum requirements of a graduate degree. The following rules apply:

- course credits applied toward a previously awarded graduate degree cannot be transferred;
- transfer of independent work, research, thesis or dissertation credit is not permitted;
- only courses assigned a B grade or better can be transferred;
- short courses lasting fewer weeks than the number of credits may not be transferred;
- students must be in good academic standing at the time of transfer; and
- courses must have been taken in graduate status.

Housing for Graduate Students

Information about on-campus graduate student housing may be found at: <http://www.uky.edu/housing/graduate-family-housing-locations>. In general, most of our graduate students live off-campus, with the exception being new international students. The choices in off-campus housing are diverse, and each student's situation should be taken into consideration when selecting the appropriate housing. For example,



- Do you have your own transportation or will you ride the bus or a bike?
- Do you want to avoid undergraduate hotspots?
- How much are you comfortable paying for rent?

Know your housing options before arriving to campus using the resources provided by the Off-Campus Student Services Center at <https://www.uky.edu/studentsservices/OCSA/know-your-options>. Additionally, current graduate students are another great resource for helping new students find housing. Dr. Alicia Modenbach (alicia.modenbach@uky.edu) can put future students in touch with our current graduate students.

For More Information

General information about graduate study in the Biosystems and Agricultural Engineering Department can be obtained from the Director of Graduate Studies (Dr. Mike Sama; michael.sama@uky.edu) or our Student Services Coordinator (Dr. Alicia Modenbach; alicia.modenbach@uky.edu). You may also contact the Department Chair (Dr. Michael Montross; michael.montross@uky.edu).

THE GRADUATE SCHOOL EXPERIENCE

Each graduate student's experience is individualized; however, there are definite guidelines to assist with structuring the process. It is expected that M.S. students beginning graduate work with a B.S. in engineering will take two (2) years to complete their degree, while Ph.D. students beginning their graduate work with a M.S. in engineering will take three (3) years to complete their degree.

Graduate Coursework

Typical BAE graduate coursework combines courses in Biosystems and Agricultural Engineering, mathematics, statistics, other engineering fields, the physical sciences and the biological sciences. The student will meet with his/her faculty advisor upon embarking on their graduate program to determine which classes he/she will take.

The courses to be taken as a M.S. student must be selected in consultation with your faculty advisor, and the courses must comply with the rules detailed in the plan of study (Appendix II). The Plan of Study form may be found on the BAE website. The M.S. requires a minimum of 24 graduate credit hours. **M.S. students are required to have their plan of work approved by their faculty advisor and the DGS before the end of the first semester of their graduate work.**

The Ph.D. requires a minimum of 36 course hours (not residency credit) past the bachelor's degree, of which 18 course hours may be from a related master's degree. Courses are selected to develop quantitative physical and engineering understanding, particularly in the subject area of the dissertation, and the student's advisory committee can require more than the minimum 36 hours. Credit is not given for thesis activity in meeting the minimum hour requirement. The remaining 18 course hours must be technical courses related to the project and the degree, with no more than six hours resulting from a Special Topics in Biosystems Engineering course (BAE 750). Each Ph.D. student is expected to complete at least one advanced math or statistics course (past the B.S.) and one semester of the BAE Professional Practices Seminar (BAE 775). Ph.D. students who have completed their M.S. degree in the BAE Department and who already have two semesters of credit for BAE 775 do not have to repeat BAE 775. It is also expected that Ph.D. students will have submitted a peer-reviewed journal article by the time of their defense. **Ph.D. students are required to have their**

plan of study reviewed and approved by their advisory committee and the DGS during the first semester of their Ph.D. work.

University Scholars Program

The University Scholars Program (USP) allows undergraduates in the Biosystems Engineering program an opportunity to complete up to 12 credit hours of graduate work that can be applied to both their B.S. and M.S. degrees. BAE undergraduates, with at least 90 credit hours, a 3.2 cumulative GPA and a 3.5 major GPA, are eligible to apply to this program at the end of their junior year. Additional details regarding the [USP application process and requirements](#) are available online.

University Scholars are considered undergraduates until they have completed the coursework required for their undergraduate degree, meaning they pay undergraduate tuition rates for the coursework counting toward their graduate degree. However, they must select the “Graduate” program type when registering for graduate courses and complete the work pertaining to graduate students as outlined by the instructor(s).

To maintain their graduate program status, students must be continually enrolled in a graduate level course from the time they begin the University Scholars Program until they fully transition into their graduate program after completing their undergraduate requirements. Students must also take the exact courses proposed in their USP application. If that is not possible, a new USP application must be submitted to the College of Engineering Student Records Office for approval.

Research Requirements

The M.S. (except for the Plan B Master’s degree) and the Ph.D. are research degrees awarded for significant scholarly research or design accomplishment. Therefore, the thesis (M.S.) or dissertation (Ph.D.) are the crowning achievements of the graduate program.

The M.S. Advisory Committee

There are no formal requirements from the Graduate School for the Advisory Committee for the M.S. degree. However, the Department of Biosystems and Agricultural Engineering requires the examining committee to be formed during the **first semester** of study so that the examining committee can serve as an informal advisory committee. The faculty advisor, in consultation with the student, selects the Advisory Committee. Professional courtesy is for the

student (working with his/her faculty advisor) to ask the faculty member if they are willing to serve on the committee before assigning that person to the student's advisory committee.

The examining committee consists of three to five (3-5) qualified members with at least one having full graduate faculty membership and a second having either associate or full graduate faculty membership. At least one member must be from outside the Department of Biosystems and Agricultural Engineering. (Note: This requirement may be waived for extreme circumstances with the approval of the DGS and the Department Chair.)

The Ph.D. Advisory Committee

The student, in consultation with the faculty advisor, selects the Advisory Committee and submits the recommendation to the Director of Graduate Studies using the [Doctoral Advisory Committee Form](#) (login required). Upon approval of the Director of Graduate Studies, the request is forwarded to the Graduate School for approval and the official appointment of the faculty advisor and Advisory Committee.

The Advisory Committee provides advice to the student and specifically sets requirements, acting within applicable Program, Graduate School, and University regulations, which the student must meet in pursuit of the doctorate degree. The student has the responsibility of interacting with the committee (in consultation with the faculty advisor) and keeping them informed of his or her progress.

The Advisory Committee has a core of four members. This core consists of the faculty advisor as chair, and two other members from the major area (i.e., three members from BAE). At least one representative must be from outside the academic program (department). All members of the core must be members of the Graduate Faculty of the University of Kentucky and three (including the faculty advisor) must possess full member Graduate Faculty status. Additional faculty members may serve as members of the Advisory Committee. The core of the advisory committee must be kept at its full complement throughout the graduate career of the individual student. However, in the event of a vacancy on the committee (occasioned by resignation, faculty leave, or inability to serve), an appropriate replacement must be made (officially, by submitting a Doctoral Advisory Committee Modification Request) prior to any subsequent committee decisions.

The Graduate School will assign an outside examiner for the dissertation defense. This person may be recommended by the faculty advisor, but the assignment is at the discretion of

the Graduate School. The purpose of the outside examiner is to ensure all graduate rules are followed and the student receives a fair exam.

The Qualifying Exam

Upon completion of all coursework, Ph.D. students must sit for their qualifying exam. The general procedure used by the BAE Department is that each committee member gives a written exam to the student, with 5-7 days (determined by the committee) to complete an exam. The student then receives the subsequent exam until all written exams are completed. An oral presentation (or defense) of the written exams is scheduled for approximately two weeks after the last exam is completed.

Students must submit a Notification of Intent to sit for their qualifying exam to the Graduate School, as well as officially schedule their oral presentation portion of their qualifying exam. The student, with assistance from the faculty advisor and the committee members, typically coordinates the scheduling of the written portion of the qualifying exam.

Students must register for BAE 767 in the semester (Fall or Spring only) in which they sit for their qualifying exam. If the student sits for the qualifying exam during the summer, they must register for BAE 767 in the following fall semester. Students should be continuously enrolled in BAE 767 until they graduate.

Assessment of Doctoral Student Progress

All programs are required to assess the progress of their doctoral students. The Graduate Faculty of each doctoral program will define good progress to completion of the doctoral degree. This information will be included in the program's Graduate Student Handbook. The consequences of lack of good progress may also be included in the handbook. Each doctoral student's good progress toward the degree will be reviewed (at least) annually by either the Graduate Faculty in the program, the doctoral advisory committee, or other graduate education committee. Each student will be informed in writing of the results of that meeting by the Director of Graduate Studies or the chair of the advisory committee, or their designee.

Thesis or Dissertation Submission

Plan on your assistantship ending on the day the Graduate School accepts your thesis or dissertation due to visa requirements. In addition, please work with your advisor and lab managers to clean your lab and office space.

BAE Departmental Seminars

The BAE Department hosts weekly seminars during the fall and spring semesters on Friday at 11:00 AM. Attendance is mandatory.

The departmental seminar makes up the first hour of the BAE 775 course. All graduate students are expected to attend Seminar regularly whether they are enrolled in BAE 775 or not. It is also expected that graduate students will give at least two (2) seminars - an Entrance seminar and an Exit seminar. The Entrance seminar gives an overview of the proposed project and presents any preliminary data that has been collected. The Exit seminar is a final presentation of the student's work. See the Example Program Timelines for suggested timing of each seminar.

Example Program Timelines

While details will differ, each student should work with their faculty advisor to develop their specific timeline.

The M.S. Timeline

Prior to Semester 1

- Choose your major advisor
- Approximately 1 week before classes start, arrive on campus
- Meet with major advisor and select classes
- Register for classes
- Attend the New Graduate Student Orientation
- Complete Lab Safety trainings

Semester 1

- Select your Advisory Committee
- Finalize your Plan of Study, making sure it satisfies all the requirements of the Graduate School, the faculty advisor, and the advisory committee
- Submit a signed Plan of Study to the DGS
- Focus on coursework
- Begin your research proposal
- Mid-semester: register for Semester 2 classes

Semester 2

- Complete your research proposal (Literature Review, Problem Description, Hypotheses, Experimental Methods, Discussion of Expected Results)
- Obtain faculty advisor's approval of proposal
- Submit proposal to DGS
- Present Entrance seminar

Summer

- Conduct preliminary experiments

Semester 3

- Finish coursework or register for BAE 748 (0 credits) if all coursework is completed
- Continue your research
- Begin writing thesis, making sure to use the Graduate School guidelines and following the Instructions for Preparation of Thesis
- Be aware that there are several important deadlines **months before** you plan to defend

Semester 4

- Register for BAE 748 (0 credits)
- Submit Application for Degree
- Complete experiments
- Complete data analysis
- Present Exit seminar
- Complete and defend your thesis
- **Graduate!**

The Ph.D. Timeline

Prior to Semester 1

- Choose your major advisor
- Approximately 1 week before classes start, arrive on campus
- Meet with major advisor and select classes
- Register for classes
- Attend the New Graduate Student Orientation
- Complete Lab Safety trainings

Semester 1

- Choose your research topic
- Select your Advisory Committee
- Finalize your Plan of Study, making sure it satisfies all the requirements of the Graduate School, the faculty advisor, and the advisory committee
- Submit a signed Plan of Study to the DGS
- Focus on coursework
- Begin your research proposal
- Mid-semester: register for Semester 2 classes

Semester 2

- Continue working on your research proposal (Literature Review, Problem Description, Hypotheses, Experimental Methods, Discussion of Expected Results)
- Continue taking courses

Summer

- Conduct preliminary experiments

Semester 3

- Complete your proposal
- Meet with your Advisory Committee and present proposal
- Obtain faculty advisor's approval on proposal
- Submit proposal to DGS
- Present Entrance seminar
- Finish coursework or register for BAE 767 (2 credits) if all coursework is completed
- Continue your research

Semester 4

- Register for BAE 767 (2 credits)
- Take Qualifying Exam within first 6 weeks of the semester
- Begin writing dissertation, making sure to use the Graduate School guidelines and following the Instructions for Preparation of Dissertation

Summer

- Conduct research

Semester 5

- Register for BAE 767 (2 credits)
- Continue your research
- Continue writing dissertation, making sure to use the Graduate School guidelines and following the Instructions for Preparation of Dissertation
- Be aware that there are several important deadlines **months before** you plan to defend

Semester 6

- Register for BAE 767 (2 credits)
- Submit Application for Degree
- Complete your experiments
- Complete data analysis
- Present Exit seminar
- Complete and defend your dissertation
- **Graduate!**



DEPARTMENTAL POLICIES

Expectations

Graduate students are employees of the University, and as such, are expected to act professionally. Graduate students should be available during normal business hours unless attending class or conducting fieldwork. Additional expectations include:

- Maintaining a 3.0 GPA;
- Performing job functions satisfactorily;
- Making progress toward degree;
- Assisting in designated classroom and lab preparation duties, as assigned;
- Respecting departmental property;
- Requesting permission to use equipment in other faculty member's labs prior to use; and
- Providing other assistance, as assigned.

Communication

In addition to communicating with your faculty advisor, graduate students receive relevant information and announcements through the *BAE Graduate Listserv*. These periodic emails are meant to contain meaningful and timely information for the benefit of BAE students. Your official UK email address is used for this listserv, so it is important to check that address regularly or have it forwarded to your preferred email address.

You may also wish to stay informed of university-wide events and announcements relevant to graduate students. The Graduate Student Congress is an excellent resource for graduate students. You can opt in to receiving their monthly newsletters by visiting their website at <https://www.uky.edu/gsc/>.

Safety Training

Graduate students are responsible for completing all necessary safety training courses prior to beginning work in the labs. Trainings should be completed upon arrival at UK and updated annually. Safety training courses may include, but are not limited to, (1) Fire Safety; (2) Shop Safety; (3) Chemical Hygiene; (4) Biological Safety; and (5) Hazardous Waste Handling and Disposal. More information about specific trainings can be found at

<http://ehs.uky.edu/classes/>. BAE facility manager Stephanie Kesner conducts safety training and will contact students soon after they arrive in the department to start the training process.

Responsible Conduct of Research Training

Researchers (faculty, staff, and students alike) must maintain the highest standards of scientific integrity and ethical behavior in all phases of the conduct of research. To that end, all new graduate students complete a comprehensive Responsible Conduct of Research (RCR) training program developed by the Engineering Associate Dean for Research and Graduate Studies.

Prior to arriving on campus, new graduate students are expected to complete the CITI on-line training program for Responsible Conduct of Research. This is the first of three components in the RCR training program for engineering students.

Instructions for accessing the online portion of the training program can be found under the [“Responsible Conduct of Research \(RCR\) & CITI Program”](#) tab.

When asked to choose an RCR course, choose the *Engineers Responsible Conduct of Research Course*.

Graduate students must complete all ten modules of the RCR and score 80% on the module quizzes to pass the course. Students who do not pass the course will not be allowed to register for classes.

Plagiarism

It is the student’s responsibility to understand what constitutes plagiarism and understand the university’s policy regarding cheating and plagiarism. Do not assume that a team effort is allowed unless it is clearly indicated in the assignment. A team effort should be indicated clearly in the submission. For a discussion of the overall issue and guidelines of Academic Integrity, refer to the website for the Ombud of the University of Kentucky:

<http://www.uky.edu/ombud/academic-integrity>. The Visual Communication Guy developed a useful [infographic](#) based on information found on www.plagiarism.org outlining the types and severity of various plagiarism violations.

Student Appointment and Reappointment

Students receiving research assistantships (i.e. tuition and stipend funding) from the BAE Department complete Graduate School Appointment (GSAS) forms. The GSAS forms are the contract between the student, the department, and the Grad School, and address the employment responsibilities associated with the assistantship. Students must approve their contracts each fall and spring semester they receive funding.

Plans of Study

Plans of Study should be completed as early as possible upon arrival on campus. Courses should be discussed with the faculty advisor and receive approval of the Advisory Committee. If planned courses are not offered, the Plan of Study should be revised to reflect the changes and resubmitted to the DGS and Student Services Coordinator. Additional information can be found in Appendix II and Appendix III.



Office Space & Labs

Graduate students are assigned an office space based on availability. Generally, it is a shared space, so students are expected to respect others and maintain a clean and orderly space.

Laboratories must be kept in a clean, organized, and professional manner. It is your responsibility to maintain the cleanliness of your workspace.

Keys

Graduate students will receive keys to the building, their office, and the labs in which they work. Students must sign a form acknowledging receipt of keys upon arrival to campus. Keys must be returned upon completion of the program. A hold on your transcript will be placed in the event that you fail to return your keys.

Computers

Students have access to computers located in the BAE Computer Lab (136 Barnhart). Desktop computers are not guaranteed in an office space. Students should speak with their faculty advisor about the type of equipment that may be available. If a computer is not provided by the faculty advisor, students may use their personal laptop or computers in the BAE Computer Lab.

Students do not have administrative privileges on departmental computers. All software updates and requests should be directed to Doug Carr. UK also provides several licensed software downloads students can access for their personal computers from UK's Information Technology Services website (<http://www.uky.edu/its/customer-support-student-it-enablement/customer-services/software-downloads>).

Use of Departmental Vehicles

Graduate students must have a valid driver's license on file in order to reserve and use a departmental vehicle. Keys for general use departmental vehicles are stored in a locker in Lab 182. The student's Wildcard ID number must be registered with Alex Fogle in order to access keys in the locker. Vehicles are reserved using the sign-out board next to the locker. Vehicles must be refueled and cleaned upon return. Report any problems (i.e., missing key or credit card for fuel, warning lights, noises) immediately.

Graduate Publication Scholarship

The BAE Department offers a scholarship award to recognize contributions made by graduate students who publish findings of scholarly work conducted in partial fulfillment of graduate degree requirements in the department. Graduate students must be enrolled in either an M.S. or Ph.D. program in BAE and in good academic standing to be eligible for the award. Students can receive the award for their first peer-reviewed scientific journal article submitted

and for each subsequent scientific journal article appearing in print. Students may apply for this award for up to six (6) months after graduation.

Alpha Epsilon Honor Society

Graduate students may be invited to join Alpha Epsilon. Alpha Epsilon is an honor society for outstanding agricultural, biological and food engineers. The objectives of the honor society are to promote the high ideals of the engineering profession, to give recognition to those who manifest worthy qualities of character, scholarship and professional attainment, and to encourage and support the profession.

Marketing and Communications

The department maintains a robust SharePoint site that houses shared documents and information. You will need your UK email to log in to SharePoint.

Dr. Modenbach uses a Canvas course to share information with students. Log in with your UK email address.

The primary method to reach current department members and alumni is BAE Insider, a monthly email newsletter. The department reaches outside audiences through social media. The department is active on Facebook (UK BAE), Twitter (@uk_bae), Instagram (@ukbiosystemsagengineering), and YouTube (<https://www.youtube.com/BAEuk>). Graduate students are encouraged to submit professional achievements (awards, publications, presentations, etc.) and photos to Karin Pekarchik, karin.pekarchik@uky.edu, who handles departmental news.

APPENDICES

- I. Process for Determining Background Courses for the Non-Engineering Student
- II. Sample M.S. Plan of Study
- III. Ph.D. Plan of Study
- IV. Frequently Asked Questions (FAQs)
- V. List of Abbreviations

Appendix I: Process for Determining Background Courses for the Non-Engineering Student

1. Research and Graduate Studies Committee (RGSC) receives application from non-engineering student.
2. RGSC arrives at recommendation for admission.
 - a. If “Do not admit,” stop.
 - b. If “Admit,” go on to Step 3.
3. Compare baseline coursework listing to student’s transcript to determine unfulfilled baseline coursework [form follows in this Appendix].
4. Forward results of Step 3 to DGS with admission recommendation.
5. Contingent on identification of advisor, availability of funding, and acceptance of offer (as appropriate), DGS recommends to the Graduate School that the student be admitted on “Conditional” status, contingent on completion of specified unfulfilled baseline coursework. (Note: The student is eligible to apply for a Departmental RA after completion of all Tier 1 courses.).
6. Student and advisor develop plan of study that accounts for unfulfilled baseline coursework and graduate degree program coursework; and submit to the DGS no later than the end of the first enrolled semester for review and filing.
7. Student completes coursework, notifies advisor, who notifies the DGS.
8. DGS verifies completion of unfulfilled baseline requirements, initiates a change in status to “Regular,” and notifies the major advisor when this process is complete.

Baseline Coursework Assessment Worksheet for Non-Engineering Graduate Program Applicants*

(To be forwarded with admission recommendation)

BAE Requirement	Credits	Prior/Equivalent Course*	Credits
-----Tier 1: Complete All-----			
CHE 105	4		
CHE 107	3		
MA 113	4		
MA 114	4		
MA 213	4		
MA 214	3		
PHY 231	4		
PHY 232	4		
PHY 241	1		
PHY 242	1		
<i>Subtotal</i>	<i>32</i>		
-----Tier 2: Complete Five of Seven-----			
EM 221	3		
EM 302	3		
EM 313	3		
ME 220	3		
ME 325	3		
CE 341 or ME 330	4 or 3		
EE 305	3		
<i>Subtotal</i>	<i>15-16</i>		
Total	47-48		

*Students without an entry in the "Prior/Equivalent Course" column are required to include these courses in their plan of study in addition to graduate degree program courses and must complete them prior to admission under "Regular" status.

Appendix II: Sample M.S. Plan of Study

M.S. students should work with their faculty advisor to complete their plan of study as early as possible. A plan of study, complete with signatures, should be returned to the Director of Graduate Studies and the Student Services Coordinator.

MS Graduate Plan of Study for				Jane Doe					
Plan (A or B):		A							
Enrolled:		Fall 2019							
Projected Grad. Date:		Spring 2021							
Advisor:		Shi							
Semester/Year	Prefix	Number	Credits ⁽¹⁾	TITLE	Graduate Credits ⁽²⁾	Regular Credits ⁽³⁾	>600 Credits ⁽⁴⁾	Core Credits ⁽⁵⁾	Core >600 ⁽⁶⁾
Fall 2019	STA	570	3	Basic Statistical Analysis	3	3			
Fall 2019	BAE	542	3	Biofuels and Bioproducts	3	3		3	
Fall 2019	BAE	775	3	Professional Practices Seminar	3	3	3	3	3
Fall 2019	BAE	658	3	Instrumentation for Engineering Research	3	3	3	3	3
Spring 2020	STA	674	3	Regression Analysis and Design of Experiments	3	3	3		
Spring 2020	BAE	502	3	Modeling of Biological Systems	3	3		3	
Spring 2020	BCH	401G	3	Fundamentals of Biochemistry	3	3			
Spring 2020	BAE	750	3	Special Problems in Biosystems Engineering	3		3		
Plan Totals:			24		24	21	12	12	6
CPE Required Credits:			24		24	16	12	12	6
Additional Credits Required:					None	None	None	None	None
<p>(1) Enter 0 for zero-credit courses (e.g., BAE 748, BAE 795)</p> <p>(2) Plan A requires 24 credits, Plan B requires 30 credits.</p> <p>(3) Courses with regularly-scheduled classroom lectures. Includes BAE 599, BAE 625 and BAE 750 <u>only</u> if they are taught as regular lectures.</p> <p>(4) Courses at the 600 or 700 level.</p> <p>(5) BAE (except 4XXG) and cross-listed courses.</p> <p>(6) BAE courses at the 600 or 700 level.</p>									
Student Signature and Date:					_____				
Advisor Signature and Date:					_____				
Return your completed plan of study to the DGS (dcolliver@uky.edu) and the Students Services Coordinator (alicia.modenbach@uky.edu) to be included with your files.									

Note: The courses listed are only an example. The exact courses selected for a student's plan of study should be discussed with the faculty advisor.

Appendix III: Ph.D. Plan of Study

Ph.D. students should work with their faculty advisor to complete their plan of study as early as possible. A plan of study, complete with signatures, should be returned to the Director of Graduate Studies and the Student Services Coordinator.

PhD Graduate Plan of Study for				Your Name Here
Enrolled:	Semester/Year			
Projected Grad. Date:	Semester/Year			
Advisor:	Name Here			
Semester/Year	Prefix	Number	Credits	TITLE
	BAE	0	0	
	BAE	0	0	
	BAE	0	0	
	BAE	0	0	
	BAE	0	0	
	BAE	0	0	
	BAE	0	0	
	BAE	0	0	
	BAE	0	0	
	BAE	0	0	
	BAE	0	0	
	BAE	0	0	
	BAE	0	0	
Plan Totals:			0	
Student Signature and Date: _____				
Advisor Signature and Date: _____				
Chair of Graduate Committee Signature and Date: _____				
Director of Graduate Studies Signature and Date: _____				
Return your completed plan of study to the DGS (dcolliver@uky.edu) and the Student Services Coordinator (alicia.modenbach@uky.edu) to be included with your files.				

Appendix IV: Frequently Asked Questions (FAQs)

- I am an international student in my last semester of classes, but I don't have enough hours to be considered full time. What should I do?

International students who do not have enough hours to be considered full time *in their last semester of classes*, should go to the International Center and complete an "Under-Enrolled" form that will be added to their records for visa purposes.

- I have completed all my coursework but have not yet defended my thesis or dissertation. Do I need to enroll in any courses?

Masters students who have completed all their coursework should enroll in their advisor's section of BAE 748 every semester until they graduate. This zero-credit hour course gives students full-time status.

Ph.D. candidates, beginning the semester they take their qualifying exams, should enroll in their advisor's section of BAE 767 every semester until they graduate. This two-credit hour course gives students full-time student status.

- I am unsure what constitutes plagiarism. How can I learn more about plagiarism violations?

The Visual Communication Guy developed this [handy infographic](https://thevisualcommunicationguy.com/2014/09/16/did-i-plagiarize-the-types-and-severity-of-plagiarism-violations/) outlining various types and the severity of plagiarism violations. It can also be found at:

<https://thevisualcommunicationguy.com/2014/09/16/did-i-plagiarize-the-types-and-severity-of-plagiarism-violations/>

Appendix V: List of Abbreviations

BAE	Biosystems and Agricultural Engineering
DGS	Director of Graduate Studies
GSAS	Graduate School Academic Staff
RA	Research Assistants
RCR	Responsible Conduct of Research
RGSC	Research and Graduate Studies Committee
TA	Teaching Assistants