



Graduate Student Handbook: Policies, Procedures, and Recommendations

IOWA STATE UNIVERSITY
DEPARTMENT OF AGRICULTURAL & BIOSYSTEMS ENGINEERING

1340 SUKUP HALL
605 BISSELL RD
AMES, IA 50011

Version 14 | Revised February 2023

Welcome to the Graduate Programs at Iowa State University in the Department of Agricultural & Biosystems Engineering. We are excited to have you join our vibrant programs and are eager to help your graduate educational experience be an enjoyable and rewarding one.

This student handbook is provided to give you general guidance about practices, policies, and procedures related to your graduate career in our department and University. It is in accordance with the Graduate College Handbook, which provides more detailed information on policies and can be found online at: <http://www.grad-college.iastate.edu/common/handbook/>.

Since our Graduate Programs are continuously improving and growing, some changes may occur between updates of this handbook. Consequently, you should stay in close communication with your major professor at all times to verify important curricular and policy issues. We also encourage you to bring questions, comments, and concerns to the Graduate Programs Office at any time. We look forward to helping you during your tenure here.

Best wishes,

Dr. Steve Freeman
Director of Graduate Education
3333 Elings Hall
515-294-9541
sfreeman@iastate.edu

Dr. Adina Howe
Chair, Graduate Programs Committee
3346 Elings Hall
515-294-0176
adina@iastate.edu

Graduate Programs Office
ABE Graduate Program Assistant
Kris Bell
1350F Elings Hall
515-294-1033
kabell@iastate.edu

Table of Contents

1.	Graduate Degrees Granted.....	4
1.1.	Degree options	4
1.2.	Learning Outcomes.....	4
1.3.	Basic Timetable	4
2.	Getting Started.....	7
2.1.	Admissions Requirements and Process.....	7
2.2.	Arrival and Check-In.....	8
2.3.	Orientations.....	9
2.4.	Safety Training	9
2.5.	English Requirement	9
2.6.	Major Professor	10
2.7.	Assistantships, Stipends, and Tuition Scholarships	10
2.8.	Benefits.....	11
2.9.	Registration for Classes.....	11
3.	Curriculum	11
3.1.	Agricultural and Biosystems Engineering	11
3.2.	Industrial and Agricultural Technology	12
4.	Progress Through The Degree Program.....	13
4.1.	Program Of Study Committee	13
4.2.	Developing and Submitting a Program of Study	14
4.3.	Research Or Project Proposal.....	15
4.4.	PhD Preliminary Exam	15
4.5.	Evaluating Performance.....	17
4.6.	Failure to Maintain Standing	17
5.	Completion of the Program	19
5.1.	Applying for graduation	19
5.2.	Thesis/Dissertation preparation and expectations.....	20
5.3.	Creative Component and Expectations	20
5.4.	Final Oral Examination (Defense)	21

6.	Professional Expectations.....	21
6.1.	Professional Conduct	21
6.2.	Supporting Positive Climate.....	21
7.	General Information	21
7.1.	Agricultural and Biosystems Engineering Graduate Organization (ABEGO).....	21
7.2.	Graduate and Professional Student Senate (GPSS)	22
7.3.	Office Space	22
7.4.	Keys	22
7.5.	Campus mail and US Mail	22
7.6.	Common Areas	23
7.7.	Purchasing Equipment and Supplies.....	23
7.8.	Meeting Room Reservation	23
7.9.	Professional Travel.....	23
7.10.	Absences from Campus for Personal Reasons	24
7.11.	Mediation of Disputes and Grievances.....	24

1. Graduate Degrees Granted

1.1. DEGREE OPTIONS

The Agricultural and Biosystems Engineering (ABE) department offers five graduate degrees:

- Master of Engineering in Agricultural and Biosystems Engineering (ME ABE) – course-based
- Master of Science in Agricultural and Biosystems Engineering (MS ABE) – thesis-based
- Master of Science in Industrial and Agricultural Technology (MS IAT) – thesis-based and non-thesis (creative component) options
- Doctor of Philosophy in Agricultural and Biosystems Engineering (PhD ABE)
- Doctor of Philosophy in Industrial and Agricultural Technology (PhD IAT)

1.2. LEARNING OUTCOMES

Upon completion of their graduate degree, all students should have an ability to:

- Solve problems and think critically about their focus area
- Analyze and interpret data
- Communicate effectively

PhD students should also have:

- An ability to design and conduct independent research that informs decision making
- A deep and robust understanding of the relevant literature and problems related to their research

1.3. BASIC TIMETABLE

A brief overview of key milestones in graduate study are below. Many of these milestones are discussed in more detail in subsequent sections. There may be deviations or additions in specific cases.

Upon arrival:

- International students – check in with Office of International Students and Scholars (ISSO) at 3248 Memorial Union
- Check in with the ABE Grad Programs Office (1340F Elings Hall)
- Receive forms for office, lab, and exterior door key from Department Office (1340 Elings Hall)
 - Obtain keys (after 24 hours) from the Key Issue Office, General Services Building

- Get your ISUCard (0530 Beardshear Hall)
- Students on assistantships:
 - Sign up for payroll in the Human Resources Office (3810 Beardshear Hall; take a copy of your official Letter of Intent, and two forms of ID, other than ISUCard)
 - Sign up for benefits at Student Insurance (0570 Beardshear Hall)
- Meet with major professor to discuss course registration
- Sign up for an email account online through AccessPlus or in the Solutions Center (195 Durham Center)
- International students (non-native English speakers) must register for and take English Placement Test (EPT).
- All international students on TA appointments or with any instructional responsibilities must take the Oral English Certification Test (OECT). For more information on the OECT, including a list of exemptions from this requirement, see <https://cce.grad-college.iastate.edu/ita/oect>.
- Attend Orientations:
 - All students should attend ABE Graduate Student orientation
 - Students on TAs should attend new TA orientations conducted by CELT.

During the first semester:

- Complete English requirement, if applicable (depending on the results of English testing, this may extend into additional semesters)
- Complete any necessary Safety Training as required by your responsibilities and your work space
- Complete Transportation Services Training, if you will need to drive university vehicles as part of your responsibilities (<http://www.transportation.iastate.edu/first-time-drivers#Students>)

Within two semesters:

- Identify Program of Study Committee (POSC)
- For thesis-based degrees, prepare research proposal and share with POSC
- Have POSC meeting to discuss and agree on research and course plans
- After meeting and discussion with the POSC, submit online POS forms through AccessPlus.
- Complete ABE 601 (if required)

Within two years after being admitted to the Ph.D. program (this may vary for direct admits to the PhD program):

- Discuss with your major professor the timing and format of the written preliminary exam - the major professor discusses with the POSC, and the POSC agrees upon a format and timeline.

- After approval from your major professor, schedule your Preliminary Oral Exam with your POSC, following the Graduate College guidelines about eligibility for taking Prelim [grad college rule about 12 course credits; POS].*
- Complete written Preliminary Exam at least 2 weeks before the Oral Exam date.*
- Once the POSC has agreed on a date, and at least two weeks before that date, submit the “Request for Preliminary Oral Exam” to the Graduate College.*
- Complete Preliminary Oral Exam. This must occur at least 6 months prior to Final Oral Exam date (expected graduation).

**Note that the preliminary exam should be scheduled with both your POSC and the Graduate College. The expectation is that this scheduling and associated preparation will require more time than the required two weeks, and students should plan accordingly.*

During semester of graduation:

- Submit “Application for Graduation” on AccessPlus by the deadline indicated by the Graduate College
- Discuss with your major professor and committee, and identify a date for the Final Oral
- Submit “Request for Final Oral Exam” to Graduate College 3 weeks before the exam date
- Complete the Final Oral Exam
- Submit the “Graduate Student Approval Form” to Graduate College after passing your final oral (MS/PhD). This form requires the signature of your major professor and the Director of Graduate Education (DOGE)
- Submit the “Request for Graduation Check/Approval” form to Graduate College (MEng)
- Upload your final thesis/dissertation to ProQuest/UMI. Discuss with your Major Professor if there is a need for a delayed release or other options. Trainings are available to inform you of this process and the various options.
- Return keys (just prior to departing from campus)

Summary of Key Graduate College Milestones and Deadlines

What	Who	When
1. English requirement	M.S., Ph.D.	1st semester in residence
2. Program of Study (POS) & POS Committee submitted to <i>Graduate College</i>	M.S., Ph.D.	By the end of second semester or before completing 12 credits, whichever comes first.

		POS must be approved prior to the semester in which one intends to graduate (MS) or complete the preliminary exam (PhD).
3. Request of Preliminary Examination	Ph.D.	When majority of coursework is completed (less than 12 credits remaining) and at least two weeks before exam. Preliminary exam date must be at least six months before the final examination.
4. Report of Preliminary Examination	Ph.D.	Immediately following conclusion of written and oral prelim exam (submitted by major professor)
5. Graduation Application	M.S., Ph.D.	By beginning of semester of graduation (check <i>Graduate College</i> deadlines)
6. Request for Final Examination	M.S., Ph.D.	At least three weeks before exam No earlier than the semester after approval of the POS (MS) At least six months after preliminary exam (PhD)

2. Getting Started

2.1. ADMISSIONS REQUIREMENTS AND PROCESS

The ABE Graduate Programs Committee, which is responsible for making decisions to admit students, will consider the applicant's academic history, Graduate Record Exam (GRE) scores, experience, qualifications, and other relevant information when considering admission.

Minimum qualifications for admission to our departmental graduate degree programs include:

All Degree Programs

1. 3.0 (4.0 scale) undergraduate grade-point average (GPA), per official documentation that meets the requirements of the Graduate College. Students

with a GPA below 3.0 may still be admitted in some cases, with permission of the Graduate College.

2. International (non-native English speaking) students need to take the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). Minimum scores for admission are:

TOEFL Paper (PBT) – 550

TOEFL Internet (iBT) – 79

IELTS – 6.5

Agricultural and Biosystems Engineering M.S. and Ph.D. Degrees

- Bachelors of Science degree in engineering
- OR Bachelors of Science degree, non-engineering¹ with:
 - Math through differential equations
 - College-level physics, chemistry, and biology
 - Documented competence in engineering sciences, for example: statics, mechanics of materials, dynamics, fluids, thermodynamics
 - Review and approval of transcript and materials by the ABE Engineering Curriculum Committee.
 - Students needing to take courses to meet the prerequisite requirements can begin graduate studies in IAT or another program and request to transfer to the ABE program when the criteria are met. Courses taken to meet the above criteria cannot be used on the graduate POS.

Agricultural and Biosystems Engineering M.E. Degree

- Bachelor of Science degree in engineering

Industrial and Agricultural Technology Degrees

- Bachelor of Science degree in science, technology, or engineering

2.2. ARRIVAL AND CHECK-IN

International students must first check-in with the International Students and Scholars Office (ISSO) located at 3248 Memorial Union. After check-in with ISSO, you'll need to check-in with the ABE Graduate Programs Office located at 1350F Elings Hall. Make sure

¹ Note that professional engineering (P.E.) registration is a separate process from a graduate degree, and the prerequisite qualifications for registration without an accredited B.S. in engineering vary among state licensing boards.

to bring your packet from ISSO with you. Domestic students can check-in directly with the ABE Graduate Programs Office. You can find your way around campus using the online maps page (<http://www.fpm.iastate.edu/maps/>). We will give you a welcome package, instructions on procedures to complete before the semester starts, and answer any questions you may have.

New students or returning students who have not previously worked for the university will need to sign up for payroll in the Human Resources Office (3810 Beardshear Hall). While in Beardshear, make sure you stop by Student Insurance (Rm 0570) to sign up for benefits. Please note, that students on assistantships, must have a signed Letter of Intent (LOI) on file with the ABE Graduate Programs office before the start of semester. Your first paycheck for your assistantship or fellowship can be between two weeks to a month after you arrive due to procedural delays. Please plan for finances accordingly. You are able to sign up for an email account online through AccessPlus or can stop by the Solutions Center (195 Durham Center).

2.3. ORIENTATIONS

New graduate students should attend several orientations during the week prior to start of classes. For new graduate students, the ABE department presents a Graduate Student Orientation event within the first few weeks of classes that is designed to introduce you to the ABE department and its procedures, as well as ease the transition into graduate study at Iowa State. This is also time to become better acquainted with the Graduate Programs and all aspects of graduate life.

In addition to participating in the ABE orientation events, students also will take part in the following orientation activities:

- Graduate College Orientation with Graduate and Professional Studies Student Senate (<http://www.grad-college.iastate.edu/news/news.php?id=057>)
- TAs will attend the TA orientation seminars conducted by the Center for Excellence in Learning and Teaching (CELT)
- International students should check with International Students and Scholars Office (ISSO)

2.4. SAFETY TRAINING

All students are required to complete any necessary safety training. Ask your major professor and/or the supervisor for the spaces in which you work for information on required trainings.

2.5. ENGLISH REQUIREMENT

Students whose native language is not English, MUST take a special examination called the English Placement Test (EPT) to assess suitability for classroom education at ISU. This test is held the week before classes start. Further information can be found at:

<http://engl.iastate.edu/ept/index.html>. Students who do not pass the exam are placed in one or more of the courses in English 101 during the pre-registration process at orientation. These courses may be taken on a pass-not or pass basis.

In addition, international students having Teaching Assistantship (TA) appointments must also take the Oral English Certification Test (OECT; <http://acp.grad-college.iastate.edu/?q=node/15>). Successful certification is required to assume TA duties, so we ask that all non-native English speakers complete the OECT within the first year.

2.6. MAJOR PROFESSOR

Every graduate student must have a major professor. This is a mutually agreed upon relationship between the student and faculty. The role of the major professor is to act as a mentor to the student in all aspects of graduate study including research and guide the student's professional development. Most students who have accepted assistantship positions have already identified a major professor as explained in the admission letter. Master of Engineering students may be assigned the DOGE as their major professor to help guide their course selections, or they may choose a different major professor. Information about the responsibilities and expectations of the major professor can be found in section [6.4.1](#) of the Graduate College Handbook

2.7. ASSISTANTSHIPS, STIPENDS, AND TUITION SCHOLARSHIPS

Assistantship appointments are determined by your major professor. The terms of your assistantship are described in the original offer letter and in the Letter of Intent (LOI), from which you have signed. Please note that students on assistantships must have a signed Letter of Intent (LOI) on file with the graduate programs office before the start of the first semester. The student's major professor will advise them of the duties of the appointment and the accountability procedure. You must be registered for at least two credits in order for you to be assigned and keep an appointment. All assistantship appointments are contingent on the availability of funds and maintaining satisfactory progress toward your degree.

The Graduate College sets minimum and maximum stipend ranges for graduate students. If your assistantship is a RA, your monthly stipend will be set by your major professor within University guidelines. If your appointment is as a TA, your stipend is set by the department. Students on assistantship will also receive a tuition scholarship. MS students on ½ time appointments will receive a ½ tuition scholarship and PhD students on a ½ time appointment will receive a full tuition scholarship. Both will be responsible for covering their student fees each semester unless otherwise specified. Graduate students on assistantship are assessed tuition at the full-time rate in the fall and spring semesters and per credit hour over the summer.

Please refer to [Chapter 3 of the Graduate College Handbook](#) for more specifics regarding assistantships, stipends, and tuition scholarships.

2.8. BENEFITS

Information on current benefits programs such as health and dental insurance can be found in [Section 3.2.5 of the Graduate College Handbook](#).

2.9. REGISTRATION FOR CLASSES

Registration for classes must be completed as soon as possible. Consult with your major professor regarding the courses you want to take for your first semester. If your first semester is a fall term, register for ABE/TSM 601 (not necessary for ABE ME degree).

Information on course offerings can be found on the online Schedule of Classes (classes.iastate.edu). Incoming students are encouraged to register for classes before arriving on campus. As a new student, enter your social security number (no hyphens) and month and day of your birth (mm/dd). International students who do not yet have a social security number should use the number assigned in the admission packet from the Office of Admissions. A late fee is assessed to students who do not register for classes before the first day of classes. [Information on late fees](#) is provided by the Registrar. The late fee goes up each of the following two weeks to a maximum amount, after which payroll problems may also be incurred.

Students must follow Graduate College policies on minimum and maximum course loads. These can be found in [Chapter 2](#) of the [Graduate College handbook](#).

3. Curriculum

Plan of Study requirements for each of the graduate degree programs in the ABE department are listed on our web site under [Degree Requirements](#) in the Graduate Students tab. Courses that can be used on the POS are subject to Graduate College limitations (see sections [6.3](#) and [5.1](#) of the Graduate College Handbook).

3.1. AGRICULTURAL AND BIOSYSTEMS ENGINEERING

Master of Engineering – Course-based

A minimum of 30 credits beyond the BS degree. The minimums are as follows:

- 1 course in mathematics or statistics
- 3 ABE graduate courses, excluding ABE 590, 601, 694 and 699
- 2 of the following: IE 563, IE 564, IE 565, IE 570, IE 585; SCM 524; MGMT 583; ACCT 581
- 1 course in another College of Engineering department, excluding seminars

Master of Science – Thesis-based

A minimum of 30 credits beyond the BS degree. The minimums are as follows:

- 6 credits of ABE 699 Research
- 22 minimum credits of coursework, satisfying:
 - 1 course in mathematics or statistics
 - 2 ABE graduate courses, excluding ABE 590, 601, 694 and 699
 - 1 course in another College of Engineering department, excluding seminars
- ABE 601 seminar

Doctor of Philosophy

A minimum of 72 credits beyond the BS degree (master's credits can count toward this minimum). The minimums are as follows:

- 12 credits of ABE 699 Research
- 42 credits of coursework beyond the BS degree (the credits from your master's program can count toward this requirement), satisfying:
 - 3 courses in mathematics or statistics (at least one must be Statistics 401 or higher)
 - 4 ABE graduate courses, excluding ABE 590, 601, 694 and 699
 - 3 courses in other College of Engineering departments, excluding seminars
 - ABE 694 Teaching Practicum
- ABE 601 seminar

3.2. INDUSTRIAL AND AGRICULTURAL TECHNOLOGY

Master of Science – Non-thesis

A minimum of 33 credits beyond the BS degree. The minimums are as follows:

- 3 credits of TSM 599 Creative Component
- 28 credits of coursework, satisfying:
 - 1 course in statistics
 - 2 TSM or ABE graduate courses, excluding TSM 590, 601, 694 and 699
 - 1 of the following: IE 563, IE 564, IE 565, IE 570, IE 585; SCM 524; MGMT 583; ACCT 581

Master of Science – Thesis-based

A minimum of 30 credits beyond the BS degree. The minimums are as follows:

- 6 credits TSM 699 research
- 22 credits of coursework, satisfying:
 - 1 course in statistics
 - 2 TSM or ABE graduate courses, excluding TSM 590, 601, 694, and 699

- TSM 601 seminar

Doctor of Philosophy

A minimum of 72 credits beyond the BS degree (master's credits can count toward this minimum). The minimums are as follows:

- 12 credits of TSM 699 research
- 42 credits of coursework beyond the BS degree, satisfying:
 - 3 courses in statistics and/or research methods
 - 4 TSM or ABE graduate courses, excluding TSM 590, 601, 694, 698, and 699
 - TSM 694 Teaching Practicum
 - 3 courses outside the department
- TSM 601 seminar

4. Progress Through The Degree Program

4.1. PROGRAM OF STUDY COMMITTEE

Major Professor

The major professor is the chair of your Program of Study Committee (POSC). More information on major professors and their role on the Committee can be found in [Chapter 6 of the Graduate College Handbook](#).

Committee Makeup

In addition to the major professor, the student is required to have a POSC consisting of approved faculty members. The student's POSC serves: 1) to guide, inform, and counsel the student; 2) to discuss and approve a POS; 3) to discuss and approve a topic and research project proposal and the resulting thesis or dissertation; 4) to review progress and provide advice during the student's research; and 5) to conduct the requisite oral and written examinations.

To avoid serious problems at later stages in your POS, students are strongly encouraged to develop close working relationships with their POSC members. Students are strongly encouraged to give regular progress reports (written or verbal) to all POSC members. Because of the critical role of the POSC, students should establish their POSCs, at least informally through verbal or email agreement, by the end of the first semester of study. Officially, the POSC and the POS are established at the same time, but it is almost never advisable to wait until you fill out the electronic POS form to establish your POSC.

If you are pursuing a graduate minor, dual major, or co-major, you will need to consider this in forming your POSC, since those will require a member of your POSC representing the additional element(s).

Rules and guidelines for establishing a POSC can be found in [Section 6.2 of the Graduate College Handbook](#). [Section 6.4 of the Graduate College Handbook](#) explains the roles and responsibilities of POSC members. Section 6.2.3 of the Graduate College Handbook explains that every POSC must have a member from outside the student's field of study. For a master's degree, it is recommended but not required that the outside member come from outside the department. For PhD students we require that at least one member of the POSC is from outside the department.

Changes to the POSC

Sometimes it is necessary or valuable to change POSC membership. The applicable rules and procedures for this are explained in [Section 6.2.6 of the Graduate College Handbook](#).

4.2. DEVELOPING AND SUBMITTING A PROGRAM OF STUDY

Your major professor and POSC members will assist you in crafting a POS, which should reflect your professional interests and preparation, and if in a thesis/dissertation program, your research preparation. It is expected that each student will submit their POS after no more than 12 credits of graduate coursework have been completed. Having your POS reviewed and agreed upon by the POSC sooner rather than later avoids unpleasant surprises later if it turns out you are not all in agreement.

Some common special considerations are below.

Transfer credits

Courses taken at other institutions, including graduate courses taken as part of a preceding graduate degree, may be used to meet POS requirements, with the approval of the POSC. This is outlined in section [6.3.8 of the Graduate College Handbook](#).

Overage courses

Because the Graduate College has a time-to-degree limit of seven years, courses that were taken more than seven years prior to the granting of a degree are considered "expired." The College sets guidelines and limits on the use of such expired courses in [Section 6.3.4 of the Graduate College Handbook](#).

Changes to the POS

It is not unusual that a student will have to make changes to an approved POS. There may be a variety of reasons: a planned course was not offered; a change in career directions makes it sensible to take one course instead of another; courses on the POS are offered at conflicting times and a reasonable substitute for one of them exists, and so forth. The POSC needs to approve any changes to the POS. The process for this is explained on the Graduate College website in the section on [POSC help](#).

4.3. RESEARCH OR PROJECT PROPOSAL

In addition to advising on and approving courses to be taken, the POSC also advises on and approves the research/project plan. In order to facilitate these conversations, students should prepare a research/project proposal to share with the POSC at roughly the same time as the POSC is approving the courses in the POS. At a minimum, the proposal should include: (1) a problem statement, with references to the literature as appropriate, (2) research objectives or hypotheses, and (3) methods and tasks for accomplishing the research.

4.4. PHD PRELIMINARY EXAM

A preliminary exam is required of students for admission to candidacy for the PhD degree. The rationale for the exam is to evaluate the likelihood of her/his success in the program and to propose action to better assure success if any deficiencies in preparation are identified.

The purpose of the preliminary exam is to test:

- breadth of knowledge in the students' field of study,
- depth of knowledge in the student's particular research focus,
- critical thinking skills, especially as they pertain to scientific or technical methods and approaches,
- understanding and proficiency in experimental design, analysis, and interpretation of data, and
- the student's preparedness to proceed in the program and with her/his research, identifying areas needing improvement and providing guidance as how to proceed.

The Graduate College requires that all PhD students complete an Oral Preliminary Exam. The ABE department requires a written component prior to the oral exam that meets the agreed objectives of the POSC; this can be in a test question format or a portfolio format. These options for the written component are detailed below. Regardless of the format selected for the written preliminary exam, the student will complete the written exam at least two weeks prior to the oral exam date, so that the POSC has ample time review the written exam materials as they prepare for the oral exam.

The individual POSC determines the nature of the oral and written exam components and the details of the exam's administration. For this reason, the structure, length, and subject of questions can vary among exams for individual students.

It is strongly recommended that each PhD student speak with all of her/his POSC members about expectations and areas of emphasis to be included in the written exam well in advance of the exam date.

Written Exam

The POSC members will determine, under the leadership of the major professor, which format to use for the written exam, and will evaluate the responses provided by the student. In some cases, if the written exam responses are determined by the POSC to be unacceptable, the Oral Exam may be cancelled.

Test Question Format

The written preliminary exam shall include a minimum of three questions that shall take place within a two-week period. Members of the POSC should provide these questions, as well as instruction on time length and allowable resources, to the major professor who will be responsible for administering the exam questions. The student should be prepared to answer questions that involve synthesis of a solution from an incompletely posed problem. This exam should be regarded as an evaluation of thinking skills rather than a test of rote memory. The student's answers to these questions are read and evaluated by the student's POSC prior to the Oral Exam.

Portfolio Format

The portfolio option allows the student to reflect on their learning and provide evidence of their learning in six competency areas related to their research and career goals. Selection of competency areas shall be at the discretion of the POSC. The first section of the portfolio will include a copy of the student's POS, vita, and long-term goals with a brief summary of how their POS ties in with those long-term goals. The goals and summary should be limited to approximately two pages. The second section will cover specific competencies. For each of the competency areas, the student will write a reflection (1-2 pages) on where they stand with respect to that particular competency; including a self-appraisal of their current level of understanding, coursework or life experiences that contributed to their current level of understanding, and what avenues need to be pursued in this area in the future to meet their commitment to life-long learning. The student will also include 2-3 examples (artifacts) of work that most clearly demonstrate their mastery of the competency area, along with a reflective explanation (maximum of 1 page per artifact) as to how, in their view, that artifact demonstrates the desired competency. The student portfolio is read and evaluated by the student's POSC.

Oral Exam

To officially schedule your oral preliminary exam, a "Request for Preliminary Oral Examination" form must be completed and submitted to the Graduate College no later than 2 weeks before the scheduled exam date. Copies of this form may be obtained from your home department. After processing your request, the Graduate College will email the "Report of Preliminary Oral Examination" form to the program where it will be forwarded to you and our major professor. The results of the oral preliminary exam will be recorded on this form and it will be signed by all POSC members and sent to the Graduate College.

All POSC members are expected to participate in this examination. In some cases, it may only be possible to convene the POSC in a timely manner if one of the POSC members participates at a distance. This is permitted if the distance participation is agreeable to all POSC members, if the mode of communication permits the full participation of the POSC member at a distance, and if the Graduate College is notified in advance of the oral exam in writing by the major professor and is advised who will sign for the distant POSC member at the conclusion of the oral exam.

4.5. EVALUATING PERFORMANCE

All graduate students are required to participate in an annual review process. This is generally completed during the Spring Semester, and students will receive instructions from the department leadership in annual review procedures. The review includes self-reflection and participation from the major professor providing feedback on progress. Failure to comply with this responsibility may result in termination of financial support and/or dismissal from the program.

4.6. FAILURE TO MAINTAIN STANDING

Probation

Graduate student GPAs are calculated on the basis of course work only (exclusive of research credits). Graduate students who do not maintain a cumulative 3.00 GPA are placed on academic probation. An exception is made for new, first-term, degree-seeking graduate students who receive less than a 3.00 GPA at the end of their first term at Iowa State University; these students are given a warning and a one term grace period to improve their GPA above a 3.00 before being placed on probation.

Students on probation:

- Students on probation:
- will have a hold placed on future registrations,
- will not normally receive a Graduate College tuition scholarship, if appointed to an assistantship,
- will not be admitted to candidacy for a degree if they are a doctoral student,
- will be required before registration each term to undergo a review of their record and have the program recommend in writing if the Graduate College should permit further registration, and
- must, before graduation is approved, complete all courses listed on the program of study with a minimum grade of C and have achieved a 3.00 GPA or greater.

Information and policies on probation and academic standing can be found in [Chapter 5.2.6 of the Graduate College Handbook](#).

Dismissal

Students may be dismissed from an ABE graduate program for the following causes:

1. Failure to make satisfactory progress in a degree program – such failure may include lack of research progress, a lack of aptitude, or a failure to maintain satisfactory academic standing, as outlined in the previous section of this handbook and as defined by the Graduate College Handbook.
2. Academic dishonesty – dishonesty in the classroom or in the conduct of research is considered a serious offense, and cases of such misconduct will be dealt with according to the procedures outlined in the ISU Catalog and the Graduate College Handbook. If found guilty, a student may be dismissed from the program. In issues regarding research, graduate students are held to the same conduct standards as faculty.

A student's POSC or, if the student has no committee, a student's faculty adviser may recommend dismissal for:

- failure to maintain the minimum GPA set by the Graduate College and the program,
- failure to pass within the time frame designated by the relevant academic program any required examinations, including preliminary and/or final oral examinations,
- failure to complete required coursework or a thesis/dissertation within the time frame designated by the program,
- failure to demonstrate scholarly and professional competence,
- academic probationary status for two years (see above),
- failure to comply with graduate student responsibilities or requirements discussed in the Graduate College Handbook and/or in this handbook,
- a finding by an ad hoc investigatory committee of academic misconduct in research and scholarly activity as outlined in the Faculty Handbook, Section 7.2.2.3, or
- personal conduct that violates the Regents Uniform Rules of Personal Conduct and General University Regulations discussed in the ISU Student Information Handbook and the Student Disciplinary Regulations.

The dismissal process includes the following steps:

1. An informal conference among the appropriate departmental or program officials (including the major professor) and the graduate student to seek resolution.
2. An informal conference with the dean of the Graduate College if the situation cannot be resolved at the program/department level.
3. A written warning to the student, clearly spelling out the perceived shortcomings and the steps that must be taken by the student and any deadlines that may apply; reasonable time must be given to correct deficiencies.

4. A written notification, if no resolution is reached, that includes a clear statement of the reasons for dismissal and the effective date.

Students may appeal dismissal decisions. For complete details and procedures, please see the Graduate College Handbook.

Termination of Financial Support

Although many graduate students in ABE are supported on graduate assistantships, financial support is not a requirement for continued participation in the program; however, because assistantship support requires that a student be a member of a graduate program, dismissal from the graduate program will result in termination of an assistantship and associated financial support.

Termination of financial support may occur for cause, e.g., failure to maintain minimum registration credits, neglect of duties, incompetence, persistent refusal to follow reasonable advice and counsel of faculty supervisors, failure to maintain minimum GPA, failure to comply with employee responsibilities, academic misconduct, personal misconduct. Termination of financial support for cause (except for misconduct) cannot occur without prior notice and the opportunity to improve performance. Termination of support may also occur by reason of loss of funding, i.e., withdrawal or expiration of the funding source by its sponsor.

Full details relating to termination procedures may be found in the Graduate College Handbook.

5. Completion of the Program

5.1. APPLYING FOR GRADUATION

Application for graduation should be made by the end of the third week of the semester in which the student expects to graduate. To apply for graduation, the student is required to log into their AccessPlus account and submit the electronic Application for Graduation form. Before submitting this form, a student must have submitted and had approved by the Graduate College a “Recommendation for Committee Appointment” form and a “Program of Study” form. Also, the student must have been fully admitted to a program and met the Graduate English requirement (for non-native English speakers). Graduation will be delayed if the “Application for Graduation” form filing deadline is not met. If it becomes apparent that a student cannot graduate during the indicated term, he/she should withdraw the application through AccessPlus. The student must then submit a new application for the next planned term of graduation. Upon submitting the application for graduation, all thesis/dissertation students will be charged a one-time, nonrefundable \$145 thesis/dissertation fee by the Graduate College. This fee will be billed to each

thesis/dissertation student's university bill to cover thesis/dissertation review and processing, thesis/dissertation technical assistance, and printing and binding fees for the ISU library copy.

5.2. THESIS/DISSERTATION PREPARATION AND EXPECTATIONS

Theses and dissertations are prepared electronically according to the Graduate College Thesis Manual, available on-line at: <http://www.grad-college.iastate.edu/current/thesis/>.

The thesis/dissertation is a scholarly publication demonstrating the breadth of a graduate student's research and academic activities at Iowa State University. As such, the thesis/dissertation is a statement about the student and the quality of their research, the ABE department, and the standards of excellence upheld by Iowa State University. A high-standard of writing, organization, figures, tables, and layout are expected. There are numerous of on-campus resources to improve writing quality and style.

Students should disseminate a copy of their thesis/dissertation to their committee at least two weeks before the scheduled defense date.

5.3. CREATIVE COMPONENT AND EXPECTATIONS

A student's creative component must document evidence of individual accomplishment (e.g., research project, literature-based best practices, content appropriate solutions to an existing problem etc.). The creative component project must be based on the appropriate literature within the discipline and meet expected scholarly standards for masters level work. The primary difference between a creative component and a thesis can be found in the type of scholarly writing, and the time commitment. Creative components may be a research/professional standards based report or professional/trade journal article versus research-based writing targeting publication in a peer reviewed research journal as is common for thesis writing. The time commitment for the creative component should be of the appropriate scale that it can be completed in one semester with approximately 150 hours of work associated with this 3-credit experience. The format of the creative component is determined in cooperation with the POS committee. To ensure that all committee members are in agreement with both the scope of the project and proposed written outcome, the student should submit an appropriate project proposal to their committee for approval prior to the semester in which the creative component will be completed. As with a thesis, a creative component should be submitted to members of the POS committee two weeks before the final oral examination. After the Graduate Student Approval Form has been signed by the major professor, the student must submit their creative component to the ISU Digital Repository in accordance with Graduate College guidelines.

5.4. FINAL ORAL EXAMINATION (DEFENSE)

As a part of the Final Oral Examination procedure, candidates for the M.S. or Ph.D. degree are expected to give a seminar to present and defend their research dissertation or creative component. This Examination consists of a one-hour general presentation in a public seminar, including time for questions from the audience. Candidates should prepare approximately 40 minutes of material, and allow the remaining time for questions and discussion. Immediately following the public seminar, the audience will be excused, and a closed-session examination by the candidate's POS Committee will commence. Candidates for the M.E. degree do not have a final oral examination.

Graduate College information on final oral examinations, including applicable policies and procedures, is found [in section 7.1.2 of the Graduate College Handbook](#).

6. Professional Expectations

6.1. PROFESSIONAL CONDUCT

All students, faculty, and staff in ABE are expected to adhere to appropriate standards of professional behavior and ethics. Graduate students are expected to demonstrate a commitment to their academic endeavors, to make steady progress toward academic milestones and goals, and to demonstrate ethical practices at all times. Information about policies and procedures to assist in this can be found in [Chapter 9 of the Graduate College Handbook](#). In particular, section 9.4 provides links to policies and statements of specific interest to Graduate Students.

6.2. SUPPORTING POSITIVE CLIMATE

The ABE department endorses and follows the [Iowa State Principles of Community](#). The University also strives to provide a safe, harassment-free environment for study and for work. The [Violence-Free University Policy](#) applies to graduate students.

7. General Information

7.1. AGRICULTURAL AND BIOSYSTEMS ENGINEERING GRADUATE ORGANIZATION (ABEGO)

This organization's aims are to obtain better communication among ABE graduate students; to promote communication between faculty and graduate students; to consider issues of graduate concern in ABE and IAT; and to enhance the quality of graduate education in ABE and IAT. Every graduate student in those programs is a member of ABEGO and strongly encouraged to attend meetings and be involved.

7.2. GRADUATE AND PROFESSIONAL STUDENT SENATE (GPSS)

This organization is an elected body through which graduate and professional students express their concern for the welfare of graduate and professional students at Iowa State University, develop and disseminate ideas for the improvement of graduate and professional education, and contribute to the formation of relevant University policies.

The ABE department has two senator positions. In general Senators are required to attend monthly GPSS meeting (the last Monday of the month, 6:30 p.m.), be an active member of the Senate (partake in voting, discussion, etc.), and to relay important information back to their Departments. Senators from our department are elected by ABEGO.

7.3. OFFICE SPACE

The Department assigns available office and desk space to graduate students. Major Professors will work with the graduate secretary and the chair of the departmental Space Committee to make those assignments. Priority of office space for students is generally given in the following order: 1) full-time Ph.D. students on RA/TA or fellowship, 2) full-time master's students on RA/TA or fellowship, 3) full-time self-funded graduate students, and 4) part-time graduate students.

Each graduate student is responsible for maintaining a neat and safe environment in the assigned office and laboratory as per campus regulations. Food items should not be disposed of in office spaces, as the trash is not emptied daily. Waste food should be disposed of in the kitchen areas located on each floor. Separate recycling is to be performed by the graduate students themselves.

Office spaces must be cleaned out completely upon graduation.

7.4. KEYS

Once a graduate student is assigned office space, the major professor will initiate the key request, in collaboration with the main office. The major professor will also make arrangements for lab or other keys, if the student will require such. Students are responsible for picking up keys at 108 General Services Building after orders have been processed and will need to take the request form with them.

Keys must be returned prior to graduation and a form is required for that process as well.

Lost or stolen keys can be replaced for a fee.

7.5. CAMPUS MAIL AND US MAIL

For students with office space in Elings or Sukup Halls, a mailbox is provided for each half office space (4 desks) as well as faculty and staff. The mailroom is located in 1201 Sukup Hall. Students should check their mailbox regularly. Personal mail should not be delivered to the department, nor should personal outgoing mail be mailed from the

department. Personal packages may be delivered to your campus address unless it becomes a problem.

7.6. COMMON AREAS

Refrigerators, microwaves, and coffeepots are located on each floor in Sukup Hall. Graduate students, faculty, and staff may all use these resources. Every user is expected to clean up after themselves, to be respectful of the shared nature of these resources, and to follow posted instructions. Repeated failure to properly use these facilities may result in suspension or termination of access.

7.7. PURCHASING EQUIPMENT AND SUPPLIES

For equipment and supplies used for research, the student must secure permission from their major professor before making any purchase. Additionally, all purchases require an account number to charge the purchase to, and a detailed business purpose (what you are buying and how it will be used) must be identified. The major professor will provide instruction on how to make purchases. Graduate students should not purchase supplies on their own and expect reimbursement.

7.8. MEETING ROOM RESERVATION

Meeting room reservations can be made by request to Sylvia Anderson or Kris Bell, by phone or email. They will need date, start and end times, and approximate attendance.

7.9. PROFESSIONAL TRAVEL

Graduate students may have the opportunity or need to travel in support of their research or professional development. For travel that is supported by a university account number, policies and procedures exist for travel planning and reimbursement of expenses. Graduate students should discuss and obtain approval for such travel from their major professor.

Travel Related Expenses

Before going on travel, please discuss with your major professor or stop into the main office to discuss what travel expenses can and cannot be reimbursed. Basic information can be found at <http://www.controller.iastate.edu/travelinformation/allowableexpenses.htm>. Your major professor can also provide instruction on how to make travel arrangements and what policies and timelines apply.

Travel Professional Advancement Grant (PAG)

Travel Professional Advancement Grant (PAG) forms are filled out by the grad student to request funding from the Graduate and Professional Student Senate (GPSS) to help support your trip expenses. Each graduate student is eligible to receive one Travel PAG per

fiscal year (July 1 through June 30). For more information please see the “PAG Funding” section on the GPSS website at: <http://www.gpss.iastate.edu/students/pag/>.

7.10. ABSENCES FROM CAMPUS FOR PERSONAL REASONS

Arrangement for a leave of absence is made between the graduate student and their major professor adhering to all grant and other funding source restrictions. The leave policy for graduate students is found in [Chapter 3 of the Graduate College Handbook](#).

7.11. MEDIATION OF DISPUTES AND GRIEVANCES

When graduate students become involved in disputes with their major professors that cannot be resolved by direct communication, the DOGE will serve as informal or formal mediator depending on the particular circumstances. Students should feel free to contact the DOGE should such disputes arise. All such conversations are strictly confidential and the DOGE will work with the student to help resolve the dispute. Several formal University avenues of appeal are available to graduate students to handle grievances concerning grades and instruction and for grievances related to scholarly and professional competence. In most cases, procedures start at the department or program level and lead through a series of steps to higher appeal channels. All such grievance procedures must be initiated within 3 weeks after end of semester during which the alleged grievance occurred. Information for appeals at higher levels can be found in [Chapter 9.5 of the Graduate College Handbook](#).