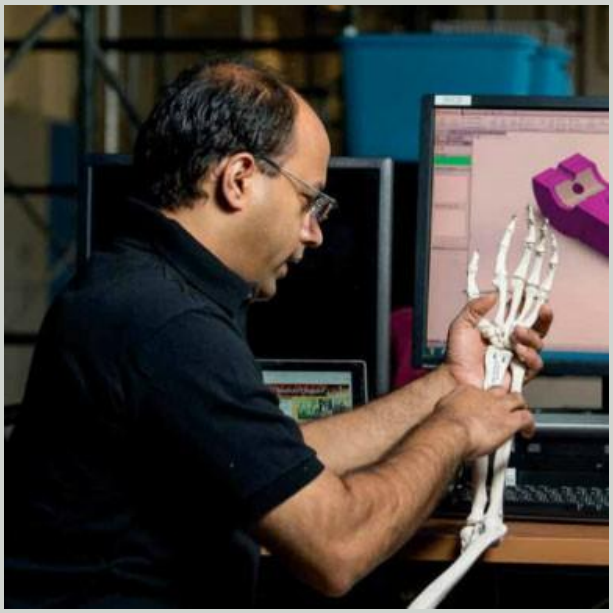


Bioengineering MENG Program Handbook 2025-2026

Oregon State University

Oregon State University (OSU)
Bioengineering, MEng Program

NOTE: Official program requirements are available in the OSU catalog. If there is a conflict between what is stated here and what is presented in the catalog, the catalog requirements take precedent.

COURSEWORK REQUIREMENTS

RECOMMENDED PREREQUISITE COURSEWORK

The following is recommended prerequisite coursework to prepare you to be successful in the Bioengineering Graduate Program.

Students with a B.S. degree in a non-engineering field are strongly encouraged to take the following courses prior to enrolling in the BIOE core courses:

- Math through Differential Equations
- One year of Physics
- A course on computer programming (e.g., Python)

REQUIRED COURSEWORK

MEng students must take a total of 45 graduate credits. Thesis credits cannot be used, and blanket credits are limited to a maximum of 9. Thus, at least 36 credits of non-blanket coursework is required. At least half of the courses must be graduate stand-alone courses. The remaining courses can be the 500 component of 400/500 slash courses. *(Note: blanket courses are courses with a zero as the second number, e.g., CBEE 507.)*

MEng students must take the BIOE core, professional development and portfolio courses, and electives, as detailed below.

BIOE Core Courses (10 credits)

All BIOE MEng graduate students are **required** to take the following BIOE core courses:

BIOE	**611**	(3)	**Cellular and Molecular Bioengineering**
BIOE	**612**	(4)	**Modeling of Physiological Systems**
BIOE	**613**	(3)	**Drug and Medical Device Regulation in Technology Development**

Professional Development (3 credits):

During their first year, all newly enrolled MEng students are **required** to take:

CBEE 507 (3) **Professional Development Seminar**

All MEng students are also **required** to take:

BA 550 or EMGT 554 (3) Ethics
WR 545 (3) Technical Writing

The 1 credit professional development seminar serves as an extended orientation to CBEE and will provide mandatory training, an introduction to important OSU resources, and development of skills to aid in navigating graduate school. The MEng portfolio created in the WR 545 Technical writing course demonstrates your mastery, synthesis, and communication of subject matter knowledge in the context of your professional goals. It serves as the culmination of the MEng program and is the final required class for the MEng degree.

Elective Course Selection (remaining credits):

At least 26 credits of elective courses are required. Electives must be non-blanket courses. Elective courses should be selected in consultation with your faculty advisor, and must be approved as a part of your Program of Study. When selecting elective courses, consideration should be given to your areas of interest, your background, and achieving a balance between breadth and depth. Typically, students choose a range of courses in each of the following categories: engineering fundamentals, mathematics and statistics, biomedical science, and bioengineering. Some representative courses in each of these categories are provided below. (This is a non-exhaustive list.)

Bioengineering:

Course number	*Course title*	*Credit hours*
BIOE 545	Surface analysis	3
BIOE 557	Bioreactors	3
BIOE 562	Bioseparations	3
ECE 599	Bioelectronic Systems and Devices	3
ECE 599	Biosensors and Medical Devices	3
CS 546	Networks in Computational Biology	3
IE 545	Human Factors Engineering	4
ROB 567	Human-Robot Interaction	4
ROB 562	Human Control Systems	4
KIN 525	Biomechanics of Musculoskeletal Injury	3
H 594	Applied Ergonomics	3
ME 513	Bio-Inspired Design	4
NSE 583	Radiation Biology	3

Biomedical Sciences:

Course number	*Course title*	*Credit hours*
VMB 521	Animal Models	3
VMB 652	Cancer Systems Biology	3
VMB 670	Introduction to Systems Biology	2

VMB 671	Molecular Tools	3
VMB 672	Molecular Approach to Cancer	1
VMB 673	Comparative Immunology	3
VMB 674	Vaccines and New Therapies	3
BB 585	Applied Bioinformatics	3
BB 586	Advanced Molecular Genetics	3
BB 590	Biochem 1: Structure & Function	3
BB 591	Biochem 2: Metabolism	3
BB 592	Biochem 3: Genetic Biochem	3
PHAR 525	Foundations of Drug Action I	3
PHAR 537	Bioorganic Chemistry	3
PHAR 547	Antibiotics and Infectious Disease	3
PHAR 548	Drug Actions in Immunology	3
PHAR 563	Cancer and Chemoprevention	2
PHAR 572	Applied Biopharmaceutics & Pharma	3
PHAR 574	Nanomedicine	3
PHAR 591	Pharmacology I	5
PHAR 594	Advances in Manipulating the Human Genome	3

Mathematics and Statistics:

Course number	*Course title*	*Credit hours*
ST 515	Design and Analysis of Planned Experiments	3
ST 592	Statistical Methods for Genomics Research	3
MTH 528	Stochastic Elements in Mathematical Biology	3
ME 526	Numerical Methods for Engineering Analysis	3
VMB 631	Mathematical Modeling of Biological Systems	3

Engineering Fundamentals:

Course number	*Course title*	*Credit hours*
ECE 564	Digital Signal Processing	4
ME 546	Convection Heat Transfer	3
ME 565	Incompressible Fluid Mechanics	3
CHE 520	Mass Transfer	4
CHE 537	Chemical Engineering Thermodynamics	4

Program of Study:

A program of study form must be submitted and on file with the graduate school. The program of study defines the student's path to completion of coursework, and once approved, it becomes the obligation of the student to complete the requirements as formulated. MEng students should have their program of study completed by the end of their first term in the program. Changes in the program must be approved by the student's committee after submitting a Petition for Change of Program form available in the Graduate School. It is highly recommended that students get approval for any changes in their program prior to enrollment in courses.

Transfer Credit:

Eligible graduate coursework completed previously can be transferred for credit towards the MEng degree with the consent of the student's advisor. Completion of the Transfer Credit Request Form is required if these credits were obtained outside of OSU.

ADVISOR SELECTION

MEng students will be assigned an advisor by the Graduate Program Coordinator during their first term in the program.

COMMITTEE

The MEng committee consists of 3 members:

- the student's advisor;
- CBEE Program Coordinator; and
- BIOE Program Director

MENG PORTFOLIO

The MEng portfolio demonstrates the student's mastery, synthesis, and communication of subject matter knowledge in the context of the student's professional goals. It serves as the culmination of the MEng program for the MEng degree. MEng students will assemble their portfolio in their last term of residence as part of the WR 545 course. The final portfolio will be assessed by both the course instructor and reviewed by the student's academic advisor. Briefly, the aim of the portfolio is to highlight the following three elements:

A. A statement of the candidate's professional goals for obtaining the MEng degree;
B. An overview of how the MEng coursework, including both major and minor areas, provided the preparation needed to achieve the candidate's professional goals;
C. A highlight of examples from class projects, homework, job search efforts, etc., that illustrate and elaborate on item B.

Additionally, the portfolio should demonstrate attainment of the program's three graduate learning outcomes.

TIMELINE AND CHECKLIST

On the following page is a brief list of the steps required to obtain the MEng degree. You should also become familiar with the specific and detailed information contained in the Graduate School Catalog as well as School requirements.

PROCEDURES FOR MENG STUDENTS			
Check Box	**Item #**	**Step**	**Timing**
	1	Be assigned a major professor	By the end of your first term
	2	File a Program of Study form	By the completion of first term
	3	Register for WR 545	Final term in residence
	4	Compare Program of Study form and transcripts for consistency	
	5	File Petition for Change in Program form, if needed	
	6	Review CBEE Graduate Learning Outcomes rubric used for evaluating final exams	
	7	Confirm submission of your approved Program of Study with Graduate School	
	8	File a Diploma Application	
	9	Fill out Exam Scheduling Form	
	10	Graduate School Survey will be emailed to you. If you complete it a gift will be mailed to you.	A month after graduation

CURRICULUM CHART FOR BIOENGINEERING MEng STUDENTS

Year 1		
Fall	Winter	Spring
CBEE 507 Professional Development Prof. Dev. 1cr	CBEE 507 Professional Development 1cr	CBEE 507 Professional Development 1cr
BIOE 611 Cell & Tissue Engineering 3 cr	BIOE 613 Drug & Medical Device Regulations in Tech Dev 3 cr	WR 545 Technical Writing 3cr
BIOE 612 Modeling of Physiological Systems 4 cr	BA 550 or EMGT 554 Ethics 3 cr	Grad Minor or Elective 3-4 cr
Grad Minor or Elective 3-4 cr	Grad Minor or Elective 3-4 cr	Grad Minor or Elective 3-4 cr
Grad Minor or Elective 3-4 cr	Grad Minor or Elective 3-4 cr	Grad Minor or Elective 3-4 cr
TOTAL 15	15	15

BIOE core (10 cr): BIOE 611, BIOE 612, BIOE 613.

Professional Development & Portfolio (3 cr): CBEE 507 Professional Development is required in fall, Winter, Spring; WR 545 is required in the last term.

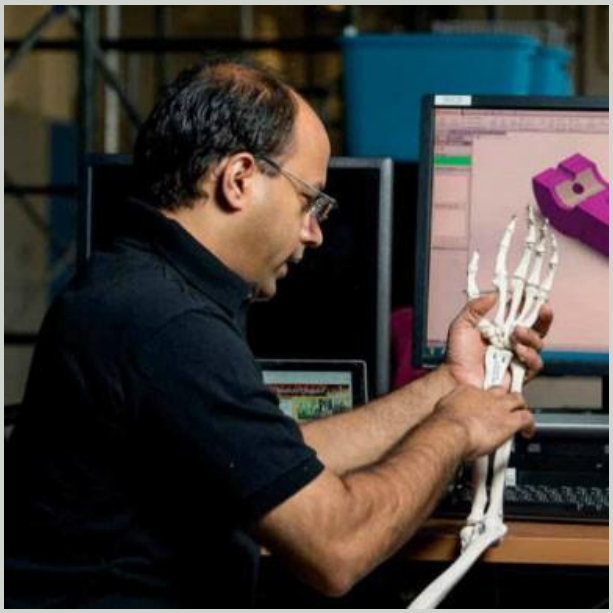
Graduate Elective (26 cr): Any graduate-level course. These are the most flexible credits. If pursuing a minor, a graduate minor typically requires 15 credits of courses from the minor field.

45 Total Credits required

Note: The completion timeline can vary.

Evaluated Graduate Learning Objectives/Outcomes for BIOE MEng Program

MEng Outcomes
Outcome 1: Demonstration of Scholarship The student will be able to assemble a capstone portfolio synthesizing aspects of core knowledge in the fields spanned by Bioengineering and to effectively communicate this work to a technically literate audience. This will be assessed using Technical Writing WR 545.
Outcome 2: Mastery of Subject Material The student will be able to think critically, creatively and to address technical problems in Bioengineering. This will be assessed through satisfactory completion of the graduate program of study.
Outcome 3: **Ethical Conduct** Students will be educated in ethical and responsible conduct in professional activities. This will be assessed through satisfactory completion of the graduate seminar (CBEE507).



Bioengineering MS Program Handbook 2025-2026

Oregon State University

UNIVERSITY OF OREGON

University of Oregon (UO)/Oregon State University (OSU)
Joint MS Program

PROGRAM OVERVIEW

The UO/OSU Joint MS program provides an unrivaled research and training environment that will prepare you to excel in private, government and academic sectors through a combination of technical, innovation, entrepreneurial and professional training. You will draw on the combined strengths of both institutions to tackle the complex, interdisciplinary research challenges in bioengineering and accelerate your progress toward successful careers. Further, you will gain real-world experience in multi-site collaboration that will be a hallmark of both academic and private sector research for decades to come. Training in innovation, entrepreneurship, communication and teamwork is threaded throughout your coursework and research experience to accelerate your progress toward your degree and career.

The joint graduate program offers you many benefits relative to programs sited on a single campus. These benefits include:

1. Enhanced education by tapping broader and deeper faculty expertise in the collaborative development and delivery of educational content;
2. Enhanced research collaborations between the two campuses that result from frequent, substantive faculty and student interactions;
3. Elevation of the Program's national brand, rankings and industry reputation by tapping a larger critical mass of faculty mentors and expertise;
4. Accelerated education and research progress by sharing complementary educational and research facilities; and
5. Expanded employment opportunities through a broader network of external relationships.

You will have complete access to courses, libraries, and other facilities at both OSU and UO, and upon selecting a permanent lab, you can assemble a thesis committee with appropriate faculty from both campuses. Upon graduation, you will receive a diploma issued by both institutions.

HOME CAMPUS

Your primary research home, and the place where you receive your student services, is your "home campus". At this time, MS students can only work with research advisors at OSU, so all MS students will have OSU as their home campus. The home campus provides an administrative home to students and manages all student experiences that must be tied to a location (e.g., health and student services, Graduate School forms and procedures, recreation center access, and athletic programs). All MS students in the Joint Program will have complete access to courses, research facilities, and libraries at both OSU and UO.

The administrative home for OSU home campus students is the School of Chemical Biological and Environmental Engineering (CBEE). Students are encouraged to contact the CBEE graduate program coordinator Kimberly Compton (kimberly.compton@oregonstate.edu) if they have any questions.

For other regulations relevant to OSU graduate students, see the OSU Graduate School Catalog (https://catalog.oregonstate.edu/college-departments/graduate-school/#policiestext).

THESIS-BASED AND PROJECT-BASED MS OPTIONS

There are two research-based MS options available to students. Both MS options require a student to take the same core set of courses and have the same total course credits (45 credits). Both MS options require a student to conduct original research, with the thesis-based MS requiring 12 credits of BIOE 503 (Thesis) and the project-based MS requiring 6 credits of BIOE 506 (Projects). The balance of credits is made up with coursework, with the project-based MS requiring more elective courses than the thesis-based MS. Another key difference between the MS options is that the thesis-based MS requires the completion of a thesis that is submitted to the graduate school (as well as the student's MS committee), while the project-based MS requires completion of a shorter, technical report that is submitted to the student's committee only (but not the graduate school). Both MS options require that the student pass a final oral examination.

COURSEWORK REQUIREMENTS

RECOMMENDED PREREQUISITE COURSEWORK

The following is recommended prerequisite coursework to prepare you to be successful in the Bioengineering Graduate Program.

Students with a B.S. degree in a non-engineering field are strongly encouraged to take the following courses prior to enrolling in the BIOE core courses:

- Math through Differential Equations
- One year of Physics
- A course on computer programming (e.g., Python)

REQUIRED COURSEWORK

MS students must take a total of 45 graduate credits and 12 of those credits must be thesis credits (BIOE 503) for the thesis-based MS and 6 of those credits must be project credits (BIOE 506) for the project-based MS. No more than 6 credits of blanket-numbered courses, other than thesis (BIOE 503) or project (BIOE 506), may be counted toward the 45-credit minimum (blanket courses are courses with a zero as the second number, e.g., CBEE 507). At least half of the credits must come from graduate stand-alone courses. Students must take the BIOE core, professional development courses, research seminar and electives, as detailed below.

BIOE Core Courses:

All BIOE graduate students are required to take the following BIOE core courses:

BIOE 611: Cell and Tissue Engineering (3 credits)

BIOE 612: Modeling of Physiological Systems (4 credits)

BIOE 613: Drug and Medical Device Regulation (3 credits)

BIOE 614 (offered remotely via UO): Technology Ventures: From Concept to Commercialization (3 credits)

Professional Development:

All newly enrolled students are required to take the full professional development series, CBEE 507 Professional Development, during their first year (3 total credits). The professional development series is intended to develop your understanding of the profession, to introduce the research activities that take place in the School, and to develop professional skills including literature searching and citations, communication skills, ethics, and navigating graduate school.

Research Seminar:

Research seminars give students the opportunity for broad exposure to new research in bioengineering. In year two and beyond, all enrolled students holding a GRA/GTA position are required to register for CBEE 507 Seminar: Presentation, all terms(F/W/Sp). In addition, students are encouraged to attend the Oregon Bioengineering Symposium each year.

Elective Course Selection:

At least 14 credits of elective courses are required. Electives must be non-blanket courses. Elective courses should be selected in consultation with your faculty advisor. Consideration should be given to your research area, your background, and achieving a balance between breadth and depth. Typically, students choose a range of courses in each of the following categories: engineering fundamentals, mathematics and statistics, biomedical science, and bioengineering. Some representative OSU courses in each of these categories are provided below. (This is a non-exhaustive list.) Students can also take elective courses at the UO.

Bioengineering:

Course number	*Course title*	*Credit hours*
BIOE 545	Surface analysis	3
BIOE 557	Bioreactors	3
BIOE 562	Bioseparations	3
ECE 599	Bioelectronic Systems and Devices	3
ECE 599	Biosensors and Medical Devices	3
CS 546	Networks in Computational Biology	3
IE 545	Human Factors Engineering	4
ROB 567	Human-Robot Interaction	4
ROB 562	Human Control Systems	4
KIN 525	Biomechanics of Musculoskeletal Injury	3
H 594	Applied Ergonomics	3
ME 513	Bio-Inspired Design	4
NSE 583	Radiation Biology	3

Biomedical Sciences:

Course number	*Course title*	*Credit hours*
VMB 521	Animal Models	3
VMB 652	Cancer Systems Biology	3
VMB 670	Introduction to Systems Biology	2
VMB 671	Molecular Tools	3
VMB 672	Molecular Approach to Cancer	1
VMB 673	Comparative Immunology	3
VMB 674	Vaccines and New Therapies	3
BB 585	Applied Bioinformatics	3
BB 586	Advanced Molecular Genetics	3
BB 590	Biochem 1: Structure & Function	3
BB 591	Biochem 2: Metabolism	3
BB 592	Biochem 3: Genetic Biochem	3
PHAR 525	Foundations of Drug Action I	3
PHAR 537	Bioorganic Chemistry	3
PHAR 547	Antibiotics and Infectious Disease	3
PHAR 548	Drug Actions in Immunology	3
PHAR 563	Cancer and Chemoprevention	2
PHAR 572	Applied Biopharmaceutics & Pharma	3
PHAR 574	Nanomedicine	3
PHAR 591	Pharmacology I	5
PHAR 594	Advances in Manipulating the Human Genome	3

Mathematics and Statistics:

Course number	*Course title*	*Credit hours*
ST 515	Design and Analysis of Planned Experiments	3
ST 592	Statistical Methods for Genomics Research	3
MTH 528	Stochastic Elements in Mathematical Biology	3
ME 526	Numerical Methods for Engineering Analysis	3
VMB 631	Mathematical Modeling of Biological Systems	3

Engineering Fundamentals:

Course number	*Course title*	*Credit hours*
ECE 564	Digital Signal Processing	4
ME 546	Convection Heat Transfer	3
ME 565	Incompressible Fluid Mechanics	3
CHE 520	Mass Transfer	4
CHE 537	Chemical Engineering Thermodynamics	4

Program of Study:

A program of study form must be approved by the student's committee and filed with the graduate school. The program of study defines the student's path to completion of coursework, and, once approved, it becomes the obligation of the student to complete the requirements as formulated. The program of study must be submitted no later than 15 weeks prior to the defense. Students are encouraged to complete the program of study early so they

can get input from their committee. Changes in the program may be made by submitting a Petition for Change of Program form available in the Graduate School.

Transfer Credit:

Eligible graduate coursework completed previously can be transferred for credit towards the MS degree with the consent of the student's committee. Completion of the Transfer Credit Request Form is required if these credits were obtained outside of OSU.

ADVISOR SELECTION

Students entering the program on a teaching assistantship in the School of CBEE typically do research rotations and should select a research advisor during their first term at OSU. With

assistance from CBEE, students will identify and contact faculty members to set up a meeting to discuss research opportunities. In addition to meeting with faculty, it can also be helpful to meet with graduate students, attend lab meetings and visit the lab. At the end of the term, students will submit an Advisor Selection Form listing their top three choices for preferred advisors. The selection process will be finalized by the start of the next term. The student must sign a "letter of intent" to work with the specific advisor. This agreement is binding except in extraordinary circumstances. If a student believes a change of advisor is warranted they are encouraged to talk with the Graduate Program Coordinator.

COMMITTEE

The principal authority over a student's program resides with the student's Master's Committee. This committee is responsible for assuring that University and School requirements are satisfied, and administering the final oral examination. The committee is typically formed during spring term of the first year.

The committee consists of at least 4 members:

- the student's research advisor;
- an additional BIOE faculty member from OSU or UO;
- the student's minor professor, or if no minor is selected, the committee member may be from graduate faculty at-large at OSU or UO; and
- one Graduate Council Representative (GCR). The role of the GCR is to provide outside advocacy for the student, and they may come from any discipline outside of BIOE.

The committee is originally formed, with approval from the research advisor, at the student's invitation. The Graduate Council Representative is selected from a list generated by the online GCR list generation tool. The GCR is a permanent member of the committee and *must* attend all committee meetings, including the program of study committee meeting, and the final examination (thesis defense).

EXPECTATIONS FOR RESEARCH DISSEMINATION

Dissemination of research findings is vital to the success of our graduates and the reputation of our graduate program. Research can be disseminated in various ways, including presentations at scientific conferences, peer-reviewed publications and patents. It is generally on the basis of these presentations and publications that the quality and impact of one's research endeavors is assessed and potential for future success evaluated. Stated another way, simply completing a MS thesis is generally not sufficient for attainment of the career goals of students and faculty.

In general, MS students give at least one presentation and publish one manuscript on the basis of their research. Students will have ample opportunity to present their work and hone their scientific communication skills. In particular, students are encouraged to give an oral presentation during CBEE seminar, and to present a poster at the CBEE open house, which takes place each fall. In addition, students are encouraged to present their work at the Oregon Bioengineering Symposium, which is a one-day conference that takes place each fall. Specific

expectations for research dissemination, including guidelines and timelines, are matters to be arranged between students and their faculty advisors.

MS THESIS & FINAL ORAL EXAMINATION

A student pursuing the thesis-based MS option must submit a thesis embodying the results of research and presenting evidence of originality and ability in independent investigation. The thesis must constitute a valid contribution to knowledge in the field of study and must be based on the candidate's own investigation, including one or more of the following elements:

- Contribution to theory,
- Development of a new method or technology,
- Generation of new scientific data that clearly advances the science, and
- Development and/or novel implementation of a numerical model.

The thesis must reflect a mastery of the literature of the subject and be written in scientific format. Thesis guidelines are available at http://gradschool.oregonstate.edu/success/thesis-guide. We recommend that students use a "manuscript-based" thesis format, in which published or draft publications are bundled into a single thesis document. (See the last page of the handbook for an example title page.)

The results from studies conducted using human subjects without obtaining Institutional Review Board approval shall not be used to satisfy master's thesis requirements. For more information, please send an email to irb@oregonstate.edu or visit the IRB website at http://oregonstate.edu/research/irb/.

After completion of or while concurrently registered for all work required by the program, the student must pass a final oral examination. The final oral examination **must be scheduled in the Graduate School not less than two weeks prior** to the date of the examination. The final oral examination should be scheduled for at least two hours. The Graduate Program Coordinator must also be notified for announcement in the School of CBEE no less than two weeks prior to the examination date.

The initial portion of the final oral examination is open to all interested persons. After the open portion of the exam, the examining committee excludes all other persons and continues with the examination of the candidate's knowledge of his or her field. The committee then votes on whether or not the student should pass. If more than one negative vote is recorded by the examining committee, the candidate has failed the examination. **Only one re-examination is permitted.**

When scheduling their final oral examinations, MS students are **required to submit** the pretext pages of their thesis to the Graduate School **at least two weeks prior to the final oral examination**. Pretext pages include the abstract, copyright (optional), title page, approval page, acknowledgment page, contribution of authors, table of contents, list of figures, tables, appendices, dedication (optional), and preface (optional). It is expected that students will

distribute examination copies of their thesis to all committee members, including the Graduate Council representative, at least two weeks prior to the student's final oral examination.

Within six weeks after the final oral examination or before the first day of the following term, whichever comes first, students must upload one PDF copy of the thesis, without signatures, electronically to ScholarsArchive and submit the signed ETD submission approval form with a copy of the title page to the Graduate School. Signatures on the ETD submission approval form can be electronic, signed, scanned and emailed or faxed. If final submission occurs after the initial six-week period, the student may be subject to re-examination. Please refer to the Graduate School's website for complete details.

Within ***six weeks*** of the final oral examination, one printed copy your thesis must be submitted to the School of CBEE main office for binding and archiving in the CBEE thesis library.

TIMELINE AND CHECKLIST FOR THE THESIS-BASED MS OPTION

On the following page is a brief list of the steps required for the thesis-based MS option. You should also become familiar with the specific and detailed information contained in the Graduate School Catalog as well as School requirements.

PROCEDURES FOR THESIS-BASED MS STUDENTS			
Check Box	**Item #**	**Step**	**Timing**
	1	Choose a major professor and a general thesis topic	By the end of your first term
	2	Appoint Masters Committee with approval of your major professor	By the end of your second term
	3	Generate Grad Council Rep (GCR) list; and contact those people until you find someone willing to serve as your GCR	
	4	File a Masters Program of Study form	
	5	Read the Thesis Guide on the Grad School's website	Prior to starting your thesis
	6	Notify your major professor and committee of your intended graduation term	AT LEAST 1 term before your intended graduation term
	7	Compare Program form and transcripts for consistency	
	8	File Petition to Change Program form if needed.	
	9	Confirm submission of your approved Program of Study with Graduate School	15 weeks prior to final oral examination
	10	File a Diploma Application	
	11	Review rubric used for evaluating final exams	
	12	Complete final draft of your thesis, and submit it to your major professor for review and approval	By the start of your last term
	13	Decide on a day and time (at least 2 hours) with all Committee members (including Grad Council Rep)	AT LEAST 2 weeks prior to final oral examination
	14	Reserve a room with CBEE Office Coordinator	
	15	Fill out Exam Scheduling Form	
	16	Submit thesis pretext pages to the Graduate School	
	17	Submit a final draft of the thesis to all committee members (with advisor's approval)	
	18	Submit final oral examination appointment to Graduate Program Coordinator for announcement circulation	
	19	Remind (e-mail) Committee of the final oral examination	2 days prior to final oral examination
	20	Final oral examination	
	21	Print Electronic Thesis and Dissertation Form, obtain signature, and submit final thesis paperwork (See Submission Instructions)	Within 6 weeks of the exam or by the last day of the current term, whichever is first; if you miss the deadline, you may be required to register for an additional 3 credits.
	22	Print copy of thesis for School binding; submit to CBEE Office Coordinator.	
	23	Complete Graduate School Exit Survey (this will be emailed to you)	A month after graduation

NOTES ABOUT THE CHECKSHEET

- Although it is not included in the checklist, dissemination of research findings is essential and is expected to occur throughout your time in the program. The timing of research

presentations and manuscript preparation will depend on your research progress and should be discussed with your faculty advisor.

- Give yourself and your committee members a lot of time to plan for the defense date. Sometimes committee members will be on sabbatical leave during the term in which you plan to defend. You should check with your committee members about such leaves far in advance to better plan, especially if you need to change a committee member for any reason. Note that your GCR must attend all meetings and examinations during your degree program.

- The Diploma Application must be filed no later than week two of the term in which you defend. However, completion of the form a term or two early is OK. If you need to change your end term after you file a Diploma Application, simply fill out the application again.

- When you confirm your defense exam date with the Graduate School, you are initiating their final audit of your transcript and making sure your exam is on their calendar. If they are not aware of your defense date, even if you filled out all the paperwork, you will not be allowed to defend and will have to reschedule.

CURRICULUM CHART FOR BIOENGINEERING THESIS-BASED MS STUDENTS

						Total Credits
Year 1	Fall	CBEE 507 Grad Seminar Prof. Dev. 1 cr	BIOE 611 Cell & Tissue Engineering 3 cr	BIOE 612 Modeling of Phys Systems 4 cr	Grad Minor or Elective 3-4 cr	12
	Winter	CBEE 507 Grad Seminar Prof. Dev. 1 cr	BIOE 613 Drug & Med Device Regs in Tech Dev 3 cr	Grad Minor or Elective 3-4 cr	BIOE 503 MS Thesis Variable 1-12 cr	12
	Spring	CBEE 507 Grad Seminar Prof. Dev. 1 cr	BIOE 614 Tech Ventures: Concept to Commercialization 3 cr	Grad Minor or Elective 3-4 cr	BIOE 503 MS Thesis Variable 1-12 cr	12
Year 2	Fall	CBEE 507 Grad Seminar Presentation 1 cr	Grad Minor or Elective 3-4 cr	BIOE 503 MS Thesis Variable 1-12 cr		12
	Winter	CBEE 507 Grad Seminar Presentation 1 cr	Grad Minor or Elective 3-4 cr	BIOE 503 MS Thesis Variable 1-12 cr		12
	Spring	CBEE 507 Grad Seminar Presentation 1 cr	BIOE 503 MS Thesis Variable 1-12 cr			12

BIOE core (13 cr): BIOE 611, BIOE 612, BIOE 613, BIOE 614. BIOE 614 is offered remotely through UO.

Professional development (3 cr): CBEE 507, Seminar Professional Development is required for 3 terms (F/W/Sp).

Research seminar: CBEE 507, Seminar Presentations, each term after the 1st year.

M.S. Thesis (12 cr): Variable credits. Thesis credits can go over 12 units total to meet GTA/GRA requirements.

Graduate Elective (14+ cr): Any graduate-level course, typically 4-5 courses. These are the most flexible credits. A graduate minor typically requires 15 credits of courses from the minor field. Students should consult with their research advisor about elective courses.

45 Total Credits required

Note: the completion timeline can vary and depends on how long it takes for successful completion of the MS coursework, research, and thesis.

MS PROJECT & FINAL ORAL EXAMINATION

A student pursuing the project-based MS option will complete a research project and submit a report to their committee summarizing the results of the research that includes evidence of originality and ability in independent investigation. The contents of the report must constitute a valid contribution to knowledge in the field of study and must be based on the candidate's own investigation, including one or more of the following elements:

- Contribution to theory,
- Development of a new method or technology,
- Generation of new scientific data that clearly advances the science, and
- Development and/or novel implementation of a numerical model.

The results from studies conducted using human subjects without obtaining Institutional Review Board approval shall not be used to satisfy master's degree program requirements. For more information, please send an email to irb@oregonstate.edu or visit the IRB website at http://oregonstate.edu/research/irb/.

After completion of or while concurrently registered for all work required by the program, the student must pass a final oral examination. The final oral examination **must be scheduled in the Graduate School not less than two weeks prior** to the date of the examination. The final oral examination should be scheduled for at least two hours. The Graduate Program Coordinator must also be notified for announcement in the School of CBEE no less than two weeks prior to the examination date.

The initial portion of the final oral examination is open to all interested persons. After the open portion of the exam, the examining committee excludes all other persons and continues with the examination of the candidate's knowledge of his or her field. The committee then votes on whether or not the student should pass. If more than one negative vote is recorded by the examining committee, the candidate has failed the examination. **Only one re-examination is permitted.**

It is expected that students will distribute their project report to all committee members, including the Graduate Council representative, at least two weeks prior to the student's final oral examination.

TIMELINE AND CHECKLIST FOR THE PROJECT-BASED MS OPTION

On the following page is a brief list of the steps required to obtain the MS degree for each of the MS options. You should also become familiar with the specific and detailed information contained in the Graduate School Catalog as well as School requirements.

PROCEDURES FOR PROJECT-BASED MS STUDENTS			
Check Box	**Item #**	**Step**	**Timing**
	1	Choose a major professor and a project topic	By the end of your first term
	2	Appoint Masters Committee with approval of your major Professor	By the end of your second term
	3	Generate Grad Council Rep (GCR) list; and contact those people until you find someone willing to serve as your GCR	
	4	File a Masters Program of Study form	
	6	Notify your major professor and committee of your intended graduation term	AT LEAST 1 term before your intended graduation term
	7	Compare Program form and transcripts for consistency	AT LEAST 1 term before your intended graduation term 15 weeks prior to final oral examination
	8	File Petition to Change Program form if needed.	
	9	Confirm submission of your approved Program of Study with Graduate School	
	10	File a Diploma Application	15 weeks prior to final oral examination By the start of your last term
	11	Review rubric used for evaluating final exams	
	12	Complete final draft of your report, and submit it to your major professor for review and approval	
	13	Decide on a day and time (at least 2 hours) with all Committee members (including Grad Council Rep)	AT LEAST 2 weeks prior to final oral examination
	14	Reserve a room with CBEE Office Coordinator	AT LEAST 2 weeks prior to final oral examination

NOTES ABOUT THE CHECKSHEET

- Although it is not included in the checklist, dissemination of research findings is essential and is expected to occur throughout your time in the program. The timing of research presentations and manuscript preparation will depend on your research progress and should be discussed with your faculty advisor.

- Give yourself and your committee members a lot of time to plan for the defense date. Sometimes committee members will be on sabbatical leave during the term in which you plan to defend. You should check with your committee members about such leaves far in advance to better plan, especially if you need to change a committee member for any reason. Note that your GCR must attend all meetings and examinations during your degree program.

- The Diploma Application must be filed no later than week two of the term in which you defend. However, completion of the form a term or two early is OK. If you need to change your end term after you file a Diploma Application, simply fill out the application again.

- When you confirm your defense exam date with the Graduate School, you are initiating their final audit of your transcript and making sure your exam is on their calendar. If they are not aware of your defense date, even if you filled out all the paperwork, you will not be allowed to defend and will have to reschedule.

CURRICULUM CHART FOR BIOENGINEERING PROJECT-BASED MS STUDENTS

						Total Credits
Year 1	Fall	CBEE 507 Grad Seminar Prof. Dev. 1 cr	BIOE 611 Cell & Tissue Engineering 3 cr	BIOE 612 Modeling of Phys Systems 4 cr	BIOE 506 MS Project Variable 1-12 cr	9-12
	Winter	CBEE 507 Grad Seminar Prof. Dev. 1 cr	BIOE 613 Drug & Med Device Regs in Tech Dev 3 cr	Grad Minor or Elective 3-4 cr	BIOE 506 MS Project Variable 1-12 cr	9-12
	Spring	CBEE 507 Grad Seminar Prof. Dev. 1 cr	BIOE 614 Tech Ventures: Concept to Commercialization 3 cr	Grad Minor or Elective 6-8 cr	BIOE 506 MS Project Variable 1-12 cr	9-12
Year 2	Fall	CBEE 507 Grad Seminar Presentation 1 cr	Grad Minor or Electives 6-8 cr	BIOE 506 MS Project Variable 1-12 cr		9-12
	Winter	CBEE 507 Grad Seminar Presentation 1 cr	Grad Minor or Elective 6-8 cr	BIOE 506 MS Project Variable 1-12 cr		9-12

BIOE core (13 cr): BIOE 611, BIOE 612, BIOE 613, BIOE 614. BIOE 614 is offered remotely through UO.

Professional development (3 cr): CBEE 507, Seminar Professional Development is required for 3 terms (F/W/Sp).

Research seminar (3 cr): CBEE 507, Seminar Presentations, each term after the 1st year.

M.S. Project (6 cr): Variable credits. Project credits can go over 6 units total to meet GTA/GRA requirements.

Graduate Elective (20+ cr): Any graduate-level course, typically 6-7 courses. These are the most flexible credits. A graduate minor typically requires 15 credits of courses from the minor field. Students should consult with their research advisor about elective courses.

45 Total Credits required

Note: the completion timeline can vary and depends on how long it takes for successful completion of the MS coursework and research project.

PROGRAM OF STUDY EXAMPLE

MASTERS

OregonStateUniversity
Graduate School

Check One	☐ EdM	☐ MA	☐ MAPE	D MATRN	D MCoun	D MEng	0 MF	C MFA	D MHP	☐ MPP	181 MS	D PSM

First Name | Middle Initial | (Former)

Last Name (Family)

Day Phone | !DI/ | Email Address

Degree Now Held | When/WheneRcvd

Academic Unit	
Malor	
g, orOption ☐	
Minor ☐ or Option ☐	

Check One ☐ Non-Thesis 181 Thesis

CAPSTONE

Tnn1f1n SnnDol	G•	Thesis (6-12 credits) If aoollcable	Course Deot.	No.	Cr.	Gl'.
		Thesis	BIOE	SO'.>	12	

n1n1ror S mb>ol	G•	Non-Thesis Project, Research or PSM Internship (3·6 credits) If aoolicable	Course Dect.	No.	Cr.	Gr.
				501		
				505		
				506		
				510		
				Total	12	

$UPP0R1WE REQUISITES

MA ONLY: Foreign language requirements vary amon academic unlls

Languages

Master's students are expected to **"Be** able to conduct scholarly or professional activitles In an ethical manner". Indicate the training you have completed or will complete to meet thl learning outcome. See of thosform for more lnformatlon.

Ethical **Research Training** CITI R ponsible Conduct of Research

SFM ONLY (MF, MS & PhD): See SFM Advising Gulde

Cornmu111cation Training

a. Total Major Hours	
b, Total First Minor or Option Hours	
c. Total Blanket Hour Credits	3
d. Total 4XX/5XX Program Credi!$	9
e. Total Graduale Standalone Credits	36
TOTAL CREDITS ON PROGRAM (d+e)	**45**

·Mark courses that will be graduate standalone with the letter 'G" in this column.

Tnln1lor- .Syrnbol	G	Title of Major Courses	Cou·rse Dept.	No.	Cr.	Gr.
	G	Cell & Molec BioE	BIOE	511	3	
		Bioconjugation	BIOE	540	3	
		SocJus, Ethics, Eng	BIOE	520	3	
	G	Chm Eng An<1-lysis	CHE	525	4	
	G	Moceling Phys Syst	BIOE	512	4	
	G	Drug & Med Dev Reg	BIOE	513	2	
	G	Bioelc Sys & Device	ECE	599	4	
	G	Seminar Prof 'Dev	CBEE	507	3	
		Bioreactors	BIOE	557	3	
	G	Fluid Flow	CHE	514	4	

Ir adcmlonel lines are needl?d, use a second town Total 33

Trana1er S)ffibol	G	Title of Minor or Option Courses	Course Dept.	No.	Cr.	Gr,

If additional lines are needed. use a seoondform Total

Trllt'lt,fet Srmbol	G	Title of Minor or Option Courses	Course Dept.	No.	Cr.	Gr.

Ir a.clcfitlonsl lines are needed, use a second ro,m Total

Transfer courses Indicated above·

T,.a,nvfn S:-,mhoJ	University
T1	
T2	
T3	

Scoring Guide (Rubric) for Graduate Learning Outcome Assessment

PROGRAM: BIOE ◯ CHE ◯ ENVE ◯ **DEGREE: MS ◯ PHD ◯**

TYPE OF EXAM: PRELIMINARY ORAL EXAM ◯ FINAL ORAL EXAM ◯

Candidate Name: _____ Date:_____

Name and Signature of the Examining Committee Member:_____

Criteria	Does Not Pass Exam	Passes Exam	
	Unsatisfactory	Satisfactory	Exemplary
1a. Research Hypothesis and Objectives	Research problem not clearly stated, or statement not carefully considered and hypothesis-driven; Research plan to investigate a solution to the defined problem is not fully considered; measurable technical outcomes not described ◯	Research problem clearly stated and hypotheses behind research activities identified; Research plan to investigate a solution to the defined problem adequately considered; measurable technical outcomes described ◯	Research problem fully considered and hypotheses behind all research questions clearly enunciated with broader impacts in the field identified; Research plan to investigate a solution to the defined problem fully considered; measurable technical outcomes described and significance of likely measurements discussed ◯
1b. Literature Review	Disorganized and/or too brief to adequately explore the topic; widely known technical references clearly missing or not germane to the topic at hand ◯	Logically crafted and adequately explores the topic; some references known to experts in the field may be missing ◯	Fully explores the topic and illustrates the state of the knowledge in the field, may be missing an obscure reference or two ◯
2. Ability to Demonstrate a Creative Solution to the Problem	Proposed concept is well known to be described in technical literature or is impossible/illogical ◯	Proposed work is original and possible but derivative/incremental in nature ◯	Proposed work is original, practical, and high-risk/high-payoff ◯
3. Application of Science and Engineering Fundamentals	Science/Engineering principles underlying Research Hypothesis and Objectives not clearly discussed; major assumptions not stated ◯	Science/Engineering principles underlying Research Hypothesis and Objectives discussed; major assumptions clearly stated ◯	Science/Engineering principles underlying Research Hypothesis and Objectives discussed and major assumptions clearly stated; as appropriate math models and associated predictions developed ◯
4a. Quality of Written Communication	Profuse grammatical errors, poor sentence construction, and/or poor document structuring make it impossible to read through ◯	Adequate document structure, grammar, and writing enable adequate understanding of the material presented ◯	Near publication quality, great reading with minor flaws ◯
4b. Quality of Oral Communication	Disorganized presentation with low-key content; Excessively poor communication skills; Answers to questions show weakness in depth of knowledge in subject matter and/or poor critical thinking skills ◯	Adequately organized presentation where concepts flow logically; Adequate communication skills; Answers show adequate knowledge in subject area and adequate critical thinking skills ◯	Highly engaging conference quality presentation; Excellent communication skills; Answers show superior knowledge in subject area and well-developed critical thinking skills ◯

During the examination process, I did not perceive any lapses in ethical performance and/or reporting of research:

GRADUATE LEARNING OUTCOMES FOR BIOENGINEERING MS STUDENTS

Outcome 1: Scholarship

The student will be able to identify and conduct original research resulting in a significant contribution to knowledge in the fields spanned by Bioengineering and to effectively communicate this work to a technically literate audience.

This will be assessed using the M.S. Thesis and Final Oral Examination ("Defense").

Outcome 2: Mastery of Subject Material

The student will be able to think critically, creatively and to address technical problems in the fields spanned by Bioengineering.

This will be assessed through satisfactory completion of the graduate program of study, as well as course summaries written by the instructors.

Outcome 3: Ethical Conduct

Students will be educated in ethical and responsible conduct in research and professional activities.

This will be assessed through satisfactory completion of the graduate seminar (BIOE 507), as well as ethical completion of the M.S. Thesis and Final Oral Examination.

(Title)

by
(Student Name)

A (DISSERTATION or THESIS)

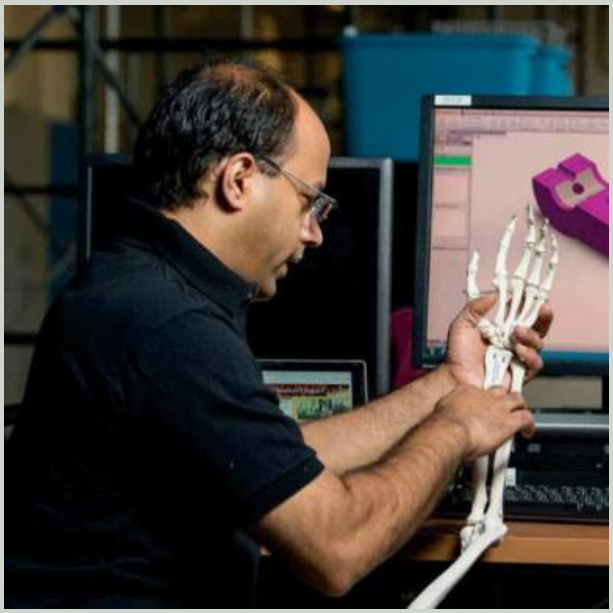
submitted to

Oregon State University
and
University of Oregon

in partial fulfillment of
the requirements for the
degree of

(Degree)

Presented (Final Exam Date)
Commencement June (2024)



Bioengineering PhD Program Handbook 2025-2026

Oregon State University

UNIVERSITY OF OREGON

University of Oregon (UO)/Oregon State University (OSU)
Joint PhD Program Student handbook

Program Overview

The UO/OSU Joint PhD program provides an unrivaled research and training environment that will prepare you to excel in private, government, and academic sectors through a combination of technical, innovation, entrepreneurial, and professional training. You will draw on the combined strengths of both institutions to tackle the complex, interdisciplinary research challenges in bioengineering and accelerate your progress toward successful careers. Further, you will gain real-world experience in multi-site collaboration that will be a hallmark of both academic and private sector research for decades to come. Training in innovation, entrepreneurship, communication, and teamwork is threaded throughout your coursework and research experience to accelerate your progress toward your degree and career.

The joint graduate program offers many benefits relative to programs sited on a single campus. These benefits include:

1. Enhanced education by tapping broader and deeper faculty expertise in the collaborative development and delivery of educational content;
2. Enhanced research collaborations between the two campuses that result from frequent, substantive faculty and student interactions;
3. Elevation of the Program's national brand, rankings, and industry reputation by tapping a larger critical mass of faculty mentors and expertise;
4. Accelerated education and research progress by sharing complementary educational and research facilities; and
5. Expanded employment opportunities through a broader network of external relationships.

You will have complete access to courses, research opportunities, libraries, and other facilities at both OSU and UO, and upon selecting a permanent lab, you can assemble a dissertation committee with appropriate faculty from both campuses. Upon graduation, you will receive a diploma issued by both institutions.

Home Campus

Your primary research home, and the place where you receive your student services, is your "home campus". You are initially admitted to a home campus based upon your research interests and the alignment of those interests with the faculty at that campus. The home campus provides an administrative home to students and manages all student experiences that must be tied to a location (e.g., health and student services, Graduate School forms and procedures, recreation center access, and athletic programs). Regardless of home campus, students will have the same core coursework, program requirements, and dissertation milestones; however, there may be minor differences in the approach to these milestones

between campuses. All students in the Joint Program will have complete access to courses, research opportunities, research facilities, and libraries at both OSU and UO.

Your home campus should match the administrative home of your primary research advisor's laboratory. Students can petition to change their home campus should there be a need to change their primary advisor. A home campus change is expected to be utilized infrequently, typically as a result of an unanticipated change in advisor or laboratory location.

Program requirements

There are several requirements of students within the joint program. Although the core requirements are the same, some of the details of implementation are governed by the academic policies of the home campus. Additional details regarding these policies are provided in the appendices provided for each of the home campuses. Note that students serving as teaching assistants will have some additional responsibilities related to their teaching appointment.

A. Enrollment:

You must maintain full-time enrollment at your home campus. Please consult the appendices for additional guidance.

It is possible for students to take a leave of absence to pursue internships or other opportunities outside the university for a limited duration. We recommend that students first meet with their dissertation committee and establish a plan for reengaging with their degree program upon return from leave. Please consult the appendices for additional guidance for your home campus.

B. Required coursework:

Students are required to complete a combination of bioengineering core courses, a professional development series, and electives. Students are required to maintain an average 3.0 GPA or greater.

<u>Bioengineering Core:</u>

BIOE 611: Cell and Tissue Engineering (3 Cr)

BIOE 612: Modeling of Physiological Systems (4 Cr)

BIOE 613 (offered remotely via OSU): Drug and Medical Device Regulation (3 Cr)

BIOE 614* (offered remotely via UO): Technology Ventures: From Concept to Commercialization (3 Cr)

*Please contact the Knight Campus Academic Business Coordinator (bioengineering@uoregon.edu) if you have any questions regarding BIOE 614.

<u>Professional Development:</u>

You are required to complete professional development training that includes career planning, communication training, and a course on the ethical conduct of research. Please see the appendices for details on the requirements at each home campus.

Electives:

You are required to complete elective coursework in bioengineering or related fields. Courses can include any graduate-level course across UO or OSU. We recommend that you consult with your research advisor and committee about selection of elective courses. Please see the appendices for details on the approval process for elective courses on each home campus.

C. Other joint program requirements

As you pursue the PhD, you will achieve a series of milestones related to your research training and dissertation work. As a joint program, each of the components in this set of requirements is the same on both campuses; however, slight differences exist in the method of execution between campuses. Please see the appendices for details on your home campus procedures.

- Establish dissertation committee – by the end of the spring term of your first year in the program
- Initial dissertation committee meeting – before the end of the fall term of your second year in the program
- Advancement exam – typically given in the second half of the spring term of your second year
- Review meetings with dissertation committee – annually after advancement
- Dissertation submission and defense

Appendix A: Procedures for UO Home Campus Students

GENERAL INFORMATION

The administrative home for UO home campus students is the Knight Campus for Accelerating Scientific Impact. Please contact the Knight Campus Academic Business Coordinator (bioengineering@uoregon.edu) if you have any questions.

Enrollment

You must maintain full-time enrollment. Full-time enrollment is 12 credits; however, you are encouraged to register for 16 credits per term.

- Credits each term will be a combination of required courses, electives, research credits (prior to advancing to candidacy) and dissertation credits (after advancement to candidacy). You should first register for courses agreed upon with your advisor(s), then register for research/dissertation credits to total 16 credits.
- While completing required coursework, students will typically register for one to two courses per term. After completing required coursework and advancing to candidacy, enrollment may consist entirely of dissertation credits or a combination of course and dissertation credits, as determined by you and your research advisor.
- Students do not formally enroll during the summer, nevertheless you are expected to participate in full-time research over summer terms consistent with your Graduate Employee (GE) appointment, unless specific arrangements have been made with research advisor and dissertation committee.
- Students wishing to take a leave of absence to pursue internships or other opportunities outside the university for a limited duration must first meet with their dissertation committee and establish a plan for reengaging with their degree program upon return from leave.

Electives

You are required to complete at least 10 credits of elective coursework.

- Courses can include any graduate-level course across UO or OSU, however, courses taken outside of the BIOE subject code must be approved by your curriculum advising team in consultation with your research advisor.

Career acceleration series

Knight Campus graduate training programs prioritize the acquisition of strong professional skills and proactive career exploration as complements to advanced research training. The overarching goal of this training program is to jump start, accelerate, and support your research productivity and career preparation.

You are required to complete career acceleration milestones and courses that provide a robust background in research ethics, design thinking, science communication, and career readiness. This series satisfies the Joint Program professional development requirement.

Career acceleration series requirements

- Participate in Impact Week
- Present a talk or poster at the annual Oregon Bioengineering Symposium
- Participate in departmental seminars as an audience member and presenter
- Create and annually update and discuss your individual development plan (IDP)
- **Complete the career acceleration course series:**
    - BIOE 610: Ethical Considerations in Research and Innovation (1 Cr, Fall 1st year)
    - BIOE 610: Science Communication & Design Thinking (1 Cr, Fall 1st year)
    - BIOE 610: Writing for Impact (1 Cr, Spring 1st year)
    - BIOE 610: Grant and Proposal Writing (1 Cr, Winter 2nd year)

Maintaining Satisfactory Progress

To be considered in good academic standing and remain enrolled in the bioengineering program, students must be in compliance with the policies of the Division of Graduate Studies (https://graduatestudies.uoregon.edu/academics/policies/general/satisfactory-progress) and maintain acceptable academic and research progress in the department by completing the joint program and Knight Campus program requirements and milestones outlined in this handbook.

Securing a position in a research laboratory is a necessary component of academic progress. Students who are admitted to the program, but not into a specific laboratory, must secure a position in a research laboratory as part of the department's research immersion program.

At the end of the research immersion quarter, students who have not received and accepted an offer to join a research group shall work with the department to develop a plan to secure a position within a research lab. This may require arranging additional rotations during the winter term. Feedback from the research immersion quarter rotations, and any subsequent rotations, shall be used to determine whether the student is making acceptable academic and research progress. A student that does not perform well in the rotations and does not secure an offer of a position in a research lab by the end of winter term will typically either voluntarily withdraw or be dismissed from the program at the end of the first academic year.

If there are concerns about a student's research progress after placement in a laboratory, but before the advancement to candidacy examination, the advisor should provide both oral and written feedback about expectations and timelines for improved performance. If the advisor deems that the student's progress is not improving within the expected timeframe, a meeting of the student's dissertation committee should be held to discuss the matter and to develop a plan for resolution. One outcome of the committee meeting is an *academic warning.* In this

case, the department will notify the student and the Division of Graduate Studies of the deficiencies that have led to the academic warning and outline the requirement(s) for reestablishing good academic standing.

Should the deficiencies persist for more than one quarter, the department will proceed to place the student on *academic probation.* A student on probation will be required to develop an academic improvement plan in consultation with their dissertation advisor and/or a designee of the department chair. Probationary status will be removed once the student has corrected the deficiencies that resulted in probation. If the student is unable to achieve the milestones within the academic improvement plan, the department may recommend that a student be dismissed from the program after at least one, and typically not more than two, quarters of probation. More details on the process related to academic probation can be found on the Division of Graduate Studies website:
https://graduatestudies.uoregon.edu/academics/policies/general/satisfactory-progress

UO Dissertation Requirements

As you pursue the PhD, you will achieve a series of milestones related to your research training and dissertation work. As a joint program, each of the components in this set of requirements is the same on both campuses; however, slight differences exist in the method of execution between campuses.

- Establish dissertation advisory committee – by June 15 of 1st year
- Initial dissertation advisory committee meeting (Fourth-Term Review) – ideally between Oct 15 and Nov 15, and no later than December 15 of 2nd year
- Advancement to candidacy exam – typically during spring term of second year, but no later than December 15 of 3rd year
- Annual review meetings with dissertation committee – each year after advancement, typically in winter term
- Dissertation submission and defense

Establishing your Dissertation Advisory Committee

University of Oregon Bioengineering PhD students will assemble their dissertation advisory committees during the spring term of their first year. You should work with your advisor to identify potential committee members. The minimum composition of the committee shall include:

1. Your Primary Research Advisor (your PI)
2. A BIOE faculty member from UO. If you are co-advised, this should be your co-advisor, regardless of their tenure home.
3. A BIOE faculty member from OSU. However, if you are co-advised and wish to have an external (non-UO/OSU) scientific contributor for position 4, this may be a UO BIOE

faculty member who serves as committee chair.

4. An additional scientific contributor:
    a. This can be any tenure-related faculty member from UO, OSU, or at another institute of higher education.
    b. If appropriate and your PI approves, this can be a collaborating clinical or industry partner. You must send a justification explaining why the collaborator would benefit your dissertation committee to the Academic Business Coordinator and include the collaborator's CV and contact information.
5. An institutional representative. This is a tenure-related member of the UO graduate faculty from a department other than bioengineering. This member serves the role of an impartial, "outside" committee member and ensures that all rules and standard practices governing committee procedures are followed.

After you have identified your ideal committee, the next step is to contact each candidate to determine if they are willing to serve on your committee. You should ask one of the members to serve as the chair of your committee. The chair of your committee must be a UO faculty member who is not your advisor or co-advisor or the institutional representative. Once all members have agreed, communicate the proposed committee composition to the Knight Campus Academic Business Coordinator (bioengineering@uoregon.edu).

Details about formal committee meetings are outlined below. In addition to these meetings, you are also encouraged to reach out to your committee chair and other members of your committee outside of your formal committee meetings to seek their mentorship, advice, and scientific expertise.

Initial dissertation advisory committee meeting (Fourth-Term Review)

During the fourth term of residence (usually the Fall term of the second year), you are required to meet with your dissertation advisory committee. This meeting is an opportunity for you to get better acquainted with your dissertation committee and to discuss research ideas and goals with them. While this review is not a pass/fail situation, your committee will assess your early progress toward the Ph.D. and provide you useful feedback. The committee will discuss your progress towards completion of course requirements and review your ideas and progress towards a dissertation.

To complete the fourth-term review a student must complete the following:

1. Report: Submit a 5-10-page report that includes an introduction to your dissertation project, a summary of early progress, and your initial ideas and plans for the dissertation. This report is due to your committee one week before the scheduled review.
2. Update your individual development plan (IDP) and submit it to your committee with your written report and forward a copy to the Knight Campus Academic Business Coordinator. You will not be assessed on your IDP, but it provides helpful context of your progress and future plans to your dissertation committee.

3. Talk: You should also prepare a 15-20-minute talk introducing the project and describing progress to date and proposed work. This talk will be a framework for the discussion at the review. Please reach out to the Knight Campus Academic Business Coordinator to schedule a location for your meeting.

Prior to the meeting, discuss the meeting format with your committee chair. All members of the committee should be invited to the meeting, but the institutional representative is not required to attend. Immediately following the meeting, your committee will give you an oral evaluation of your performance to date. In addition, your committee chair will write a brief report summarizing the meeting and the committee's assessment of your progress. This report will be sent to the Knight Campus Academic Business Coordinator for placement in your student file, and a copy of the report will be forwarded to you.

Advancement to Candidacy Exam (Sixth-Term Report)

Students should plan to schedule the 'Advancement to Candidacy Exam' for the sixth term (spring of the second year), but no later than the seventh term (fall of the third year), of their graduate career. The purpose of the advancement to candidacy exam is to assess your academic preparation and ability to successfully carry out research at the doctoral level. You will be evaluated on your depth of knowledge in the field, research progress, and dissertation research plans. These criteria are examined in the context of a written report which you will orally defend. Students are expected to have worked closely with their advisor on the research work accomplished and future directions of the work, and students are encouraged to discuss the content of the report with their mentor and other faculty. You should be able to place your research in the context of the field, report significant research progress, and present a compelling direction of the research that will comprise your dissertation.

To advance to candidacy, a student must:

1. Have completed all required core, elective, and professional development coursework with a minimum overall GPA of 3.0
2. Update your IDP and discuss it with your advisor; send a copy to the Knight Campus Academic Business Coordinator
3. Prepare a written report (details below)
4. Orally defend your written report (emphasizing both research progress and dissertation plans) in an Advancement to Candidacy Exam.

Written Report

Your written report should place your research in context, detail your research accomplishments while working in the mentor's research group, and provide a compelling and concrete plan for your dissertation research. The framework is based upon the components of the NIH F31 application that are most relevant to your advancement to candidacy and include:

- Research progress (6 pages)
- Proposed dissertation project summary (30 lines, max)

- Project narrative (3 sentence, max)
- Specific aims (1 page, max)
- Research strategy (significance and approach) (6 pages, max)
    - Significance (suggested 1-1.5 pages): Explain the importance of the problem or critical barrier to progress that the proposed project addresses. Explain how your project will improve scientific knowledge, technical capability, and/or clinical practice in one or more broad fields.
    - Approach (suggested 4-5 pages): Describe the overall strategy, methodology, and analyses to be used to accomplish the specific aims. Address how the data will be collected, analyzed, and interpreted.
- Research training plan (Goals, activities, and timeline. This should be a summary of key points from your IDP) (1 page)
- Manuscripts published, submitted, or in near final draft should be attached to complement the research report.
- Page limits based upon NIH guidelines (e.g., single-spaced, Arial, 11 pt.)

Additional details on the content for each of the sections outlined above can be found in the F31 solicitation. The grant and proposal writing course offered during winter quarter is designed to help you prepare a compelling report following this framework. Students are encouraged to use this opportunity to develop and submit an F31 or other grant/fellowship application based upon eligibility.

The Advancement to Candidacy written report is due to the Knight Campus Academic Business Coordinator and your committee one week before the exam.

Oral Defense/Advancement Exam

The Advancement to Candidacy oral defense will test your ability to think on your feet when confronted with probing questions and to demonstrate specific, as well as foundational knowledge that is important to your field of study. In both the written and oral presentations, you should stress the question(s) to be examined and indicate clearly how successful completion of the proposed research would answer the questions posed.

Students are advised to schedule this exam for 2.5 hours at minimum. The exam includes a 30-minute talk that complements the written report. Questions from the committee will lengthen the presentation. Generally, 1.5 hours are required for a discussion of your research progress and dissertation research plans. Contact the Knight Campus Academic Business Coordinator to schedule a location for your exam.

All members of the committee must attend the advancement exam. There are three possible outcomes of the advancement to candidacy exam. Students can pass unconditionally; they can be asked to rewrite selected part(s) of the report or to fulfill certain other obligations; or they can fail. The student's advisor will not participate in voting on the outcome of the exam.

Immediately following the exam, students will be given an oral evaluation of the outcome. In

addition, a brief summary of the meeting and the committee's assessment of the student's performance will be forwarded to the program for placement in your file. You will receive a copy of the report. If you are required to rewrite and/or redefend portions of the exam, written and verbal guidance will be provided about what could help you in a reexamination. A student in this situation should work closely with the committee chair to determine the best course of action.

The committee report should be sent to the Knight Campus Academic Business Coordinator to be placed in your student file.

Annual reviews

Each year following advancement to candidacy, you are required to meet with your dissertation advisory committee during Winter term. When appropriate, the annual review may coincide with a presentation at the departmental seminar series. The program will notify you when it is time to schedule the review. You should contact all members of your committee and try to accommodate their schedules in arranging a meeting. It is not necessary for all members to attend each year, but a minimal group consisting of the student's advisor, the committee chair, and one other member must be present. Prior to the meeting, update your IDP and discuss it with your advisor. Discuss the format of the meeting with your committee chair prior to the meeting.

1. Report: You are expected to write a brief report, usually 5-10 pages, summarizing research progress and plans for the coming year. You should also provide a list of other academic activities since the last Annual Review, such as courses taken for a grade, publications, seminars presented, and scientific meetings attended, including information on presentations given at the meeting, at the beginning of the report. Finally, describe your plans for completion of your dissertation.
2. Talk: You should be prepared to give a short presentation (15-20 minutes) on your progress, including a brief introduction, suitable for any committee members who are not specialists in the immediate area of research. You should also provide your committee with a brief update on your IDP, including steps you are taking to prepare for the next stages of your career.

Immediately following the review, you will be given an oral evaluation of your progress. In addition, a brief summary of the meeting and the committee's assessment of your progress will be forwarded to the Knight Campus Academic Business Coordinator for placement in your file. A copy of the report will be sent to you. Completion of annual reviews is required to maintain a student's academic standing. Failure to complete the reviews in a timely fashion means that the student is not making satisfactory progress and may not be eligible for financial support as a GE.

Ongoing committee engagement

You are encouraged to reach out to your committee chair and other members of your committee beyond your formal committee meetings to seek their advice on mentoring or their scientific expertise.

Dissertation defense

As you near the completion of your dissertation work and writing and after you have reached an agreement with your committee on a projected defense date, your defense can be scheduled. The procedural details for submitting your dissertation and defense can be found on the Graduate School website: https://gradschool.uoregon.edu/academics/policies/doctoral/oral-defense-procedures

The public defense of your dissertation must take place on campus at a date that you set in consultation with your committee chair and approved by the Graduate School. Tentative approval of the dissertation by the committee is required prior to the formal defense. This approval should be based on evaluation of copies of the final dissertation, which the candidate provides for the committee **at least 3 weeks before** the formal defense.

Check the graduate school website to ensure that you meet all the relevant deadlines. Some of the key deadlines include:

- To graduate in a given term, the oral defense must take place by **Friday of week 9** of that term.
- The deadline to apply for oral defense is **3 weeks before** the defense date.
- The signed Certificate of Completion must be submitted to the Graduate School **within 2 weeks** after the defense, or by the published deadline, whichever is earlier.
- The final, committee-approved dissertation must be uploaded, along with the Dissertation Approval Form, by **Monday of week 11** of the term of graduation.

If you have any questions, please contact the Knight Campus Academic Business Coordinator for more guidance.

Appendix A: UO Home Campus Procedures

Timeline

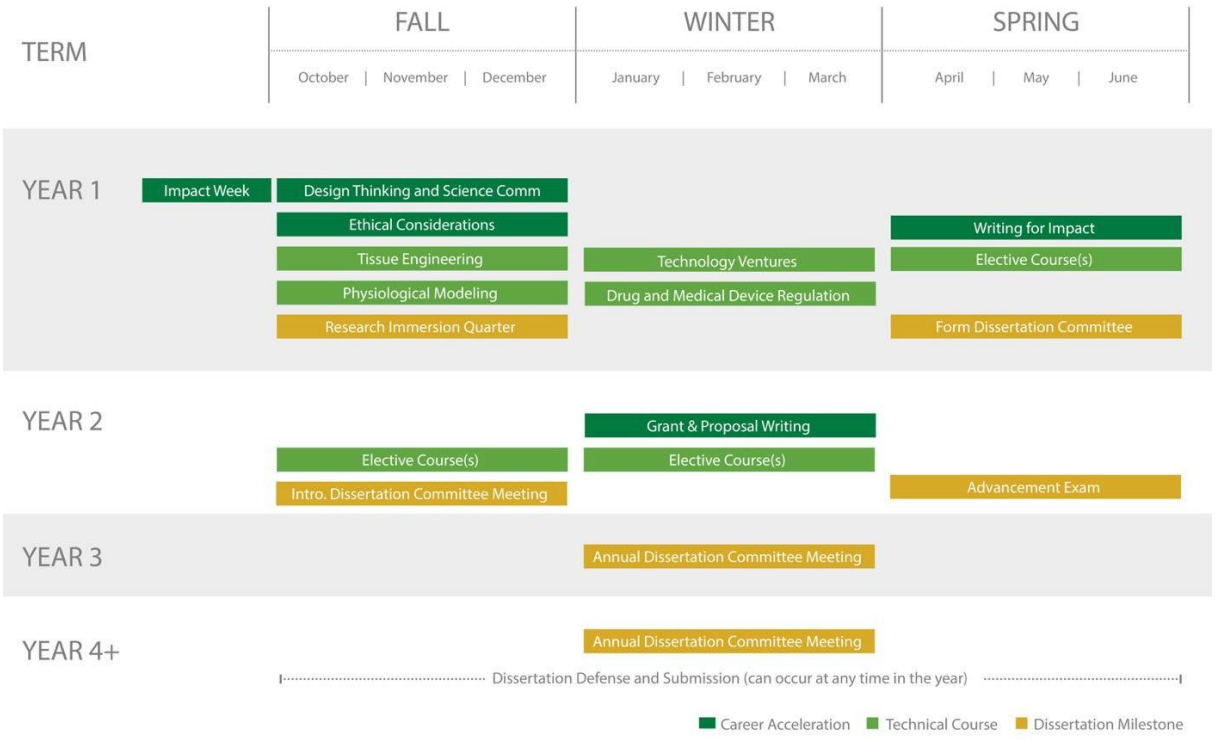


Figure A1) Typical timeline for completing course and program requirements

First year

- Participate in Impact Week and new student advising
- Complete rotations as part of Research Immersion Quarter (fall term)
- Meet with course advising team and submit plan of study
- Attend Oregon Bioengineering Symposium
- Create IDP and meet with the Director of Research Training and Career Acceleration to discuss IDP and plan of study
- Start Research
- Establish dissertation advisory committee by June 15

Second year

- Initial dissertation advisory committee meeting –during 4th term, ideally between Oct 15 and Nov 15
- Update IDP and discuss with advisor, send signed IDP form to Knight Campus Academic Business Coordinator

- Present (poster or talk) at Oregon Bioengineering Symposium
- Complete course requirements – spring term (3.0 GPA or better)
- Advancement exam – typically last half of spring term

Third year and beyond

- Annual review meetings with dissertation advisory committee – winter term each year
- Update IDP and discuss with advisor, send signed IDP form to Knight Campus Academic Business Coordinator
- Present at Department of Bioengineering seminar – at least once after year 3
- Annual participation/presentation at the Oregon Bioengineering Symposium
- Dissertation submission and defense (see above section for details and timing)

Appendix B: Procedures for OSU Home Campus Students

GENERAL INFORMATION

The administrative home for OSU home campus students is the School of Chemical Biological and Environmental Engineering (CBEE). Students are encouraged to contact the CBEE graduate program coordinator Kimberly Compton (kimberly.compton@oregonstate.edu) if they have any questions.

All Bioengineering PhD students must achieve a series of milestones that include coursework, a research project with guidance from the thesis committee, a preliminary oral examination, and a written dissertation and final examination. Details about each of these requirements are provided below.

For other regulations relevant to OSU graduate students, see the OSU Graduate School Catalog (https://catalog.oregonstate.edu/college-departments/graduate-school/#policiestext).

COURSEWORK REQUIREMENTS

RECOMMENDED PREREQUISITE COURSEWORK

The following is recommended prerequisite coursework to prepare you to be successful in the Bioengineering Graduate Program.

Students with a B.S. degree in a non-engineering field are strongly encouraged to take the following courses prior to enrolling in the BIOE core courses:

- Math through Differential Equations
- One year of Physics
- A course on computer programming (e.g., Python)

REQUIRED COURSEWORK

In total, PhD students must complete at least 108 graduate credits. Of these, at least 36 must be thesis credits (BIOE 603). At least half of the credits must come from graduate stand-alone courses. No more than 15 credits of blanket-numbered courses, other than thesis, may be counted toward the 108-credit minimum (blanket courses are courses with a zero as the second number, e.g., CBEE 507). In addition, students must take the BIOE core, professional development courses, research seminar and electives, as detailed below.

BIOE Core Courses:

All BIOE graduate students are required to take the following BIOE core courses:

BIOE 611: Cell and Tissue Engineering (3 Cr)

BIOE 612: Modeling of Physiological Systems (4 Cr)

BIOE 613 (offered remotely via OSU): Drug and Medical Device Regulation (3 Cr)

BIOE 614 (offered remotely via UO): Technology Ventures: From Concept to Commercialization (3 Cr)

Professional Development:

All newly enrolled students are required to take the full professional development series, CBEE 507 Professional Development, during their first year (3 total credits). The professional development series is intended to develop your understanding of the profession, to introduce the research activities that take place in the School, and to develop professional skills including literature searching and citations, communication skills, ethics, and navigating graduate school.

Research Seminar:

Research seminars give students the opportunity for broad exposure to new research in bioengineering. In year two and beyond, all enrolled students holding a GRA/GTA position are required to register for CBEE 507 Seminar: Presentation, all terms(F/W/Sp). In addition, students are encouraged to attend the Oregon Bioengineering Symposium each fall.

Elective Course Selection:

At least 14 credits of elective courses are required. Electives must be non-blanket courses. Elective courses should be selected in consultation with your faculty advisor. Consideration should be given to your research area, your background, and achieving a balance between breadth and depth. A list of possible elective courses is provided in Appendix C.

Program of Study:

A program of study form must be approved during a meeting with the student's committee and filed with the graduate school. The program of study defines the student's path to completion of coursework, and, once approved, it becomes the obligation of the student to complete the requirements as formulated. Doctoral students are required to submit the program of study form by the fifth term, but students are encouraged to complete the program of study early so they can get input from their committee. Changes in the program may be made by submitting a Petition for Change of Program form available in the Graduate School.

Transfer Credit:

Eligible graduate coursework completed previously can be transferred for credit towards the doctoral degree with the consent of the student's doctoral committee. Completion of the Transfer Credit Request Form is required if these credits were obtained outside of OSU.

ADVISOR SELECTION

Students entering the program on a teaching assistantship in the School of CBEE typically do research rotations and should select a research advisor during their first term at OSU. With

assistance from CBEE, students will identify and contact faculty members to set up a meeting to discuss research opportunities. In addition to meeting with faculty, it can also be helpful to meet with graduate students, attend lab meetings and visit the lab. At the end of the term, students will submit an Advisor Selection Form listing their top three choices for preferred advisors. The selection process will be finalized by the start of the next term. The student must sign a "letter of intent" to work with the specific advisor. This agreement is binding except in extraordinary circumstances. If a student believes a change of advisor is warranted they are encouraged to talk with the Graduate Program Coordinator.

DOCTORAL COMMITTEE

The principal authority over a student's program resides with the student's Doctoral Committee. This committee is responsible for assuring that University and School requirements are satisfied, monitoring student progress, assigning and approving courses of study, approving dissertation topics and paths-forward, and administering preliminary and final oral examinations. The committee is typically formed during spring term of the first year.

The committee consists of at least 5 members:

- the student's research advisor;
- an additional BIOE faculty member from OSU;
- A BIOE faculty member from UO;
- the student's minor professor, or if no minor is selected, the committee member may be from graduate faculty at-large at OSU or UO; and
- one Graduate Council Representative (GCR). The role of the GCR is to provide outside advocacy for the student, and they may come from any discipline outside of BIOE.

The committee is originally formed, with approval from the research advisor, at the student's invitation. The Graduate Council Representative is selected from a list generated by the online GCR list generation tool. The GCR is a permanent member of the committee and *must* attend all committee meetings, including the program of study committee meeting, the preliminary oral examination, and the final examination (dissertation defense).

PRELIMINARY ORAL EXAMINATION

The purpose of the preliminary oral examination is for the student to demonstrate their (i) ability to formulate a research plan, (ii) ability to communicate clearly, and (iii) understanding of the bioengineering content. Students must successfully complete the examination to advance to candidacy in the PhD program. The preliminary oral examination is taken near the completion of all course work on the Program of Study, typically between spring quarter of the second year to fall quarter of the third year.

To schedule the preliminary oral examination, students must contact the members of their committee to arrange the date, time, and place, and then schedule the examination with the Graduate School not less than two weeks before the examination using the Exam Scheduling

Form. Students must be formally enrolled (for a minimum of 3 credits) during the term in which the examination takes place.

For the preliminary oral examination, students must write a research proposal on a topic provided by their advisor, orally defend the research proposal, and answer questions from their committee on the proposal topic, as well as topics from the student's coursework. The faculty advisor should formally provide the proposal topic to the student and thesis committee three weeks before the written document is due to the committee. However, the advisor and student may discuss potential proposal topics before then. The topic of the research proposal will typically fit within the student's (anticipated) PhD research area and provides an opportunity to propose novel extensions of the research (i.e., not covered by existing proposals or funding). During the four-week examination period, students are welcome to discuss the contents of their proposal with their faculty advisor, committee and peers, but the student should independently prepare the written document and presentation (with the exception that the student may receive feedback from peers during a practice presentation). The written proposal should be submitted to the committee at least one week prior to the oral examination.

The default format for the written document is the specific aims and research strategy sections of an NIH R21/F31 proposal (i.e., 1 page for specific aims and 6 pages for research strategy). Deviations from this format, that would support the student's professional development (e.g., the student is writing a proposal for another grant mechanism that has slightly different formatting requirements), are allowed if agreed upon by the advisor and student.

ANNUAL COMMITTEE MEETINGS AND ANNUAL ASSESSMENTS

After completing the preliminary oral exam and advancing to candidacy, students should schedule annual committee meetings to present their research progress and plans for completing their doctoral research. The purpose of these meetings is to allow the committee to provide feedback to the student on their plan of research.

Students will complete the Annual Assessment of Graduate Student Academic Progress each summer. This is a formal opportunity for a student and their advisor (along with the other members of their committee if desired) to set academic and professional goals for the next academic year and to discuss progress towards the goals set from the previous year. The criteria for satisfactory progress includes (i) maintaining a 3.0 GPA average on all coursework, (ii) passing the preliminary exam, and (iii) achieving key research milestones as set by the student and advisor in the annual assessment meetings.

EXPECTATIONS FOR RESEARCH DISSEMINATION

Dissemination of research findings is vital to the success of our graduates and the reputation of our graduate program. Research can be disseminated in various ways, including presentations at scientific conferences, peer-reviewed publications and patents. It is generally on the basis of these presentations and publications that the quality and impact of one's research endeavors is assessed and potential for future success evaluated. Stated another way, simply completing a Ph.D. dissertation is generally not sufficient for attainment of the career goals of students and faculty.

In general, students give at least three presentations and publish about three manuscripts on the basis of their Ph.D. dissertation research. Students will have ample opportunity to present their work and hone their scientific communication skills. In particular, students are encouraged to give at least one oral presentation during CBEE seminar, and to present a poster at the CBEE open house, which takes place each fall. In addition, students are encouraged to present their work at the Oregon Bioengineering Symposium, which is a one-day conference that takes place each fall. Specific expectations for research dissemination, including guidelines and timelines, are matters to be arranged between students and their faculty advisors.

DOCTORAL DISSERTATION & FINAL ORAL EXAMINATION

All Ph.D. candidates must submit a thesis embodying the results of research and presenting evidence of originality and ability in independent investigation. The thesis must constitute a valid contribution to knowledge in the field of study and must be based on the candidate's own investigation, including one or more of the following elements:

- Contribution to theory,
- Development of a new method or technology,
- Generation of new scientific data that clearly advances the science, and
- Development and/or novel implementation of a numerical model.

The thesis must reflect a mastery of the literature of the subject and be written in scientific format. Thesis guidelines are available at http://gradschool.oregonstate.edu/success/thesis-guide. We recommend that students use a "manuscript-based" thesis format, in which multiple published or draft publications are bundled into a single thesis document. (See Appendix D for an example title page.)

The results from studies conducted using human subjects without obtaining Institutional Review Board approval shall not be used to satisfy doctoral dissertation requirements. For more information, please send an email to irb@oregonstate.edu or visit the IRB website at http://oregonstate.edu/research/irb/.

After completion of or while concurrently registered for all work required by the program, the student must pass a final oral examination. The final oral examination **must be scheduled in the Graduate School not less than two weeks prior** to the date of the examination. The final oral examination should be scheduled for at least two hours. The Graduate Program Coordinator must also be notified for announcement in the School of CBEE no less than two weeks prior to the examination date.

The initial portion of the final oral examination is open to all interested persons. After the open portion of the exam, the examining committee excludes all other persons and continues with the examination of the candidate's knowledge of his or her field. The committee then votes on whether or not the student should pass. If more than one negative vote is recorded by the examining committee, the candidate has failed the examination. **Only one re-examination is permitted.**

The final oral examination must be taken within five years after the preliminary oral examination. If more than five years elapse, the candidate is required to take another

preliminary oral examination.

When scheduling their final oral examinations, doctoral students are **required to submit** the pretext pages of their dissertations to the Graduate School **at least two weeks prior to the final oral examination**. Pretext pages include the abstract, copyright (optional), title page, approval page, acknowledgment page, contribution of authors, table of contents, list of figures, tables, appendices, dedication (optional), and preface (optional). It is expected that students will distribute examination copies of their dissertation to all committee members, including the Graduate Council representative, at least two weeks prior to the student's final oral examination.

Within six weeks after the final oral examination or before the first day of the following term, whichever comes first, students must upload one PDF copy of the thesis, without signatures, electronically to ScholarsArchive and submit the signed ETD submission approval form with a copy of the title page to the Graduate School. Signatures on the ETD submission approval form can be electronic, signed, scanned and emailed or faxed. If final submission occurs after the initial six-week period, the student may be subject to re-examination. Please refer to the Graduate School's website for complete details.

Within ***six weeks*** of the final oral examination, one printed copy your thesis must be submitted to the School of CBEE main office for binding and archiving in the CBEE thesis library.

TIMELINE AND CHECKLIST

On the following page is a brief list of the steps required to obtain the PhD degree. You should also become familiar with the specific and detailed information contained in the Graduate School Catalog as well as School requirements.

Procedures for PhD Students			
Check Box	**Item #**	**Step**	**Timing**
	1	Identify a Major Professor (research advisor)	By the end of the 1st term
	2	Select a committee with the help of your advisor	By the end of your first academic year
	3	Generate Grad Council Rep (GCR) list; and contact those people until you find someone willing to serve as your GCR	
	4	Schedule doctoral program meeting with all committee members and reserve a room	
	5	Doctoral program meeting: Print Doctoral program meeting checklist and take to the meeting	
	6	File Doctoral Program of Study	
	7	Schedule the Preliminary Oral Examination with your committee and reserve a room	AT LEAST 2 weeks prior to preliminary oral examination
	8	Review Preliminary Oral Examination Scoring guide	
	9	Complete and Submit Exam Scheduling Form	
	10	Complete preliminary oral examination	Spring Term, Second Year
	12	Hold regular meetings with your Committee to keep them updated on your progress	Throughout your degree progression (at least once a year)
	13	Read the Thesis Guide on the Grad School's website	Prior to starting your dissertation
	14	Compare Doctoral Program of Study form and transcripts for consistency	1 term before your intended graduation term
	15	File Petition to Change Program form if needed.	
	16	File a Diploma Application	15 weeks prior to final oral examination
	17	Complete final draft of your dissertation and submit it to your major professor for review and approval	By the start of your last term
	18	Schedule the final oral examination with your committee and reserve a room	AT LEAST 2 weeks prior to final oral examination
	19	Submit final oral examination announcement to Graduate Program Coordinator for circulation	
	20	Review final oral examination scoring guide	
	21	Complete Exam Scheduling Form	
	22	Submit dissertation pretext pages to the Graduate School	

	23	Submit a final draft dissertation to all committee members (with advisor's approval)	
	24	Confirm final oral examination appointment with the Grad School (make sure it's on their calendar!)	1 week after submitting exam scheduling form
	25	Remind (e-mail) Committee of the final oral examination	2 days prior to final oral examination
	26	Complete final oral examination	NO EARLIER THAN 1 term after passing preliminary oral examination
	27	Submit final copies (See Submission Instructions)	Within 6 weeks of the exam or by the first day of the next term, whichever is first; *if you miss the deadline, you will be required to register for an additional 3 credits, no exceptions!*
	28	Print copy of dissertation for School binding; submit to CBEE Office Coordinator.	
	29	Graduate School Survey will be emailed to you. If you complete it a gift will be mailed to you.	A month after graduation

NOTES ABOUT THE CHECKSHEET

- Although it is not included in the checklist, dissemination of research findings is essential and is expected to occur throughout your time in the PhD program. The timing of research presentations and manuscript preparation will depend on your research progress and should be discussed with your faculty advisor.

- Give yourself and your committee members a lot of time to plan for the defense date. Sometimes committee members will be on sabbatical leave during the term in which you plan to defend. You should check with your committee members about such leaves far in advance to better plan, especially if you need to change a committee member for any reason. Note that your GCR must attend all meetings and examinations during your degree program.

- The Diploma Application must be filed no later than week two of the term in which you defend. However, completion of the form a term or two early is OK. If you need to change your end term after you file a Diploma Application, simply fill out the application again.

- When you confirm your defense exam date with the Graduate School, you are making sure your exam is on their calendar. If they are not aware of your defense date, even if you filled out all the paperwork, you will not be allowed to defend and will have to reschedule.

CURRICULUM CHART FOR BIOENGINEERING PHD STUDENTS

						Total Credits
Year 1	Fall	CBEE 507 Grad Seminar Prof. Dev. 1 cr	BIOE 611 Cell & Tissue Engineering 3 cr	BIOE 612 Modeling of Phys Systems 4 cr	Grad Minor or Elective 3-4 cr	12
	Winter	CBEE 507 Grad Seminar Prof. Dev. 1 cr	BIOE 613 Drug & Med Device Regs 3 cr	Grad Minor or Elective 3-4 cr	BIOE 603 PhD Thesis Variable 1-12 cr	12
	Spring	CBEE 507 Grad Seminar Prof. Dev. 1 cr	BIOE 614 Tech Ventures: Concept to Commercialization 3 cr	Grad Minor or Elective 3-4 cr	BIOE 603 PhD Thesis Variable 1-12 cr	12
Year 2	Fall	CBEE 507 Grad Seminar Presentation 1 cr	Grad Minor or Elective 3-4 cr	BIOE 603 PhD Thesis Variable 1-12 cr		12
	Winter	CBEE 507 Grad Seminar Presentation 1 cr	Grad Minor or Elective 3-4 cr	BIOE 603 PhD Thesis Variable 1-12 cr		12
	Spring	CBEE 507 Grad Seminar Presentation 1 cr	BIOE 603 PhD Thesis Variable 1-12 cr			12
Year 3-5	Fall	CBEE 507 Grad Seminar Presentation 1 cr	BIOE 603 PhD Thesis Variable 1-12 cr			12
	Winter	CBEE 507 Grad Seminar Presentation 1 cr	BIOE 603 PhD Thesis Variable 1-12 cr			12
	Spring	CBEE 507 Grad Seminar Presentation 1 cr	BIOE 603 PhD Thesis Variable 1-12 cr			12

BIOE core (13 cr): BIOE 611, BIOE 612, BIOE 613, BIOE 614. BIOE 614 is offered remotely through UO.

Professional development (3 cr): CBEE 507, Seminar Professional Development is required for 3 terms (F/W/Sp).

Research seminar: Students are requested to enroll in CBEE 507, Seminar Presentations, each term after the 1st year.

Ph.D. Thesis (36 cr): variable credits, thesis credits can go over 36 units total to meet GTA/GRA requirements

Graduate Elective (14+ cr): Any graduate-level course, typically 4-5 courses. These are the most flexible credits. A graduate minor typically requires 15 credits of courses from the minor field. Students should consult with their research advisor about elective courses.

108 Total Credits required

Note: the completion timeline can vary and depends on how long it takes for successful completion of the PhD research project and dissertation.

PROGRAM OF STUDY EXAMPLE

Oregon State University

DOCTORAL DEGREE

Graduate School
Heckart Lodge
2900 SW Jefferson Way
Corvallis, OR 97331

Check One	☒ PhD	☐ EdD

Last Name (Family)		First Name		Middle Init.		(Former)	
Day Phone #		ID#		Email Address			

Degrees Held	University		Major		Degree		Date	
	University		Major		Degree		Date	

Academic Unit		First Minor ☐ or Option ☐	
Major		Second Minor ☐ or Option ☐	

(Please check one)

Transfer Symbol	G*	Title of Major Courses	Course Dept.	Course No.	Cr.	Gr.
	G	Cell & Molec BioE	BIOE	511	3	
		Bioconjugation	BIOE	540	3	
		SocJus, Ethics, Eng	BIOE	520	3	
	G	Chm Eng Analysis	CHE	525	4	
	G	Modeling Phys Syst	BIOE	512	4	
	G	Drug & Med Dev Reg	BIOE	513	2	
	G	Motr Ctrl & Mov Dys	KIN	515	3	
	G	Seminar Prof Dev	CBEE	507	3	
		Bioreactors	BIOE	557	3	
	G	Fluid Flow	CHE	514	4	
	G	Intro to Num Method	CHE	581	3	
	G	Thesis	BIOE	603	73	

If additional lines are needed, use a second form — **Total** 108

a. Total Major Hours	108
b. Total First Minor or Option Hours	
c. Total Second Minor or Option Hours	
d. Total Blanket Hour Credits	3
e. Total 4XX/5XX Program Credits	9
f. Total Graduate Standalone Credits	99
TOTAL CREDITS ON PROGRAM (e+f)	108

*Mark courses that will be graduate standalone with the letter "G" in this column.

Transfer Symbol	G*	Title of First Minor or Option Courses	Course Dept.	Course No.	Cr.	Gr.

If additional lines are needed, use a second form — **Total**

Transfer Symbol	G*	Title of Second Minor or Option Courses	Course Dept.	Course No.	Cr.	Gr.

If additional lines are needed, use a second form — **Total**

Transfer courses indicated above:

Transfer Symbol	University
T1	
T2	
T3	
T4	

SUPPORTIVE REQUISITES

Foreign language requirements vary among academic units.

Languages	

Doctoral students are expected to "**Be able to conduct scholarly or professional activities in an ethical manner**". Indicate the training you have completed or will complete to meet this learning outcome. See page 2 of this form for more information.

Ethical Research Training	CITI Responsible Conduct of Research

SFM ONLY (MF, MS & PhD): See SFM Advising Guide

Communication Training	

Revised October 2017

Scoring Guide (Rubric) for Graduate Learning Outcome Assessment

PROGRAM: BIOE ◯ CHE ◯ ENVE ◯ **DEGREE: MS ◯ PHD ◯**

TYPE OF EXAM: PRELIMINARY ORAL EXAM ◯ FINAL ORAL EXAM ◯

Candidate Name: _____ Date:_____

Name and Signature of the Examining Committee Member:_____

Criteria	Does Not Pass Exam	Passes Exam	
	Unsatisfactory	Satisfactory	Exemplary
1a. Research Hypothesis and Objectives	Research problem not clearly stated, or statement not carefully considered and hypothesis-driven; Research plan to investigate a solution to the defined problem is not fully considered; measurable technical outcomes not described ◯	Research problem clearly stated and hypotheses behind research activities identified; Research plan to investigate a solution to the defined problem adequately considered; measurable technical outcomes described ◯	Research problem fully considered and hypotheses behind all research questions clearly enunciated with broader impacts in the field identified; Research plan to investigate a solution to the defined problem fully considered; measurable technical outcomes described and significance of likely measurements discussed ◯
1b. Literature Review	Disorganized and/or too brief to adequately explore the topic; widely known technical references clearly missing or not germane to the topic at hand ◯	Logically crafted and adequately explores the topic; some references known to experts in the field may be missing ◯	Fully explores the topic and illustrates the state of the knowledge in the field, may be missing an obscure reference or two ◯
2. Ability to Demonstrate a Creative Solution to the Problem	Proposed concept is well known to be described in technical literature or is impossible/illogical ◯	Proposed work is original and possible but derivative/incremental in nature ◯	Proposed work is original, practical, and high-risk/high-payoff ◯
3. Application of Science and Engineering Fundamentals	Science/Engineering principles underlying Research Hypothesis and Objectives not clearly discussed; major assumptions not stated ◯	Science/Engineering principles underlying Research Hypothesis and Objectives discussed; major assumptions clearly stated ◯	Science/Engineering principles underlying Research Hypothesis and Objectives discussed and major assumptions clearly stated; as appropriate math models and associated predictions developed ◯
4a. Quality of Written Communication	Profuse grammatical errors, poor sentence construction, and/or poor document structuring make it impossible to read through ◯	Adequate document structure, grammar, and writing enable adequate understanding of the material presented ◯	Near publication quality, great reading with minor flaws ◯
4b. Quality of Oral Communication	Disorganized presentation with low-key content; Excessively poor communication skills; Answers to questions show weakness in depth of knowledge in subject matter and/or poor critical thinking skills ◯	Adequately organized presentation where concepts flow logically; Adequate communication skills; Answers show adequate knowledge in subject area and adequate critical thinking skills ◯	Highly engaging conference quality presentation; Excellent communication skills; Answers show superior knowledge in subject area and well-developed critical thinking skills ◯

During the examination process, I did not perceive any lapses in ethical performance and/or reporting of research:

GRADUATE LEARNING OUTCOMES FOR BIOENGINEERING PHD STUDENTS

Outcome 1: Scholarship

The student will be able to identify and conduct original research resulting in a significant contribution to knowledge in the fields spanned by Bioengineering and to effectively communicate this work to a technically literate audience.

This will be assessed using the Ph.D. Thesis and Final Oral Examination ("Defense").

Outcome 2: Mastery of Subject Material

The student will be able to think critically, creatively and to address technical problems in the fields spanned by Bioengineering.

This will be assessed through satisfactory completion of the graduate program of study, as well as course summaries written by the instructors.

Outcome 3: Ethical Conduct

Students will be educated in ethical and responsible conduct in research and professional activities.

This will be assessed through satisfactory completion of the graduate seminar (BIOE 507), as well as ethical completion of the Ph.D. Thesis and Final Oral Examination.

Appendix C: Example elective courses at OSU and UO

Students in the joint program have an unrivaled selection of elective courses to choose from, including any graduate-level course at OSU or UO. Elective courses should align with your research and career goals and should be selected in consultation with your faculty advisor and program administrators. Consideration should be given to your research area, career plans, your background, and achieving a balance between breadth and depth. Representative OSU and UO elective course options are provided below. This is a non-exhaustive list, please speak with your home campus program administrators if you have questions or wish to discuss additional options.

Bioengineering:

Course Number	Course Title	Credits
UO Campus		
BIOE 610	Biomaterials	4
BIOE 610	Protein Engineering	4
BIOE 610	Synthetic Biology	4
BIOE 610	Biosensors	4
BIOE 610	Embedded Systems	4
BIOE 610	Topics in Theory of Biological Systems	4
HPHY 513	Muscle Structure, Function, and Plasticity	4
HPHY 534	Movement Disorders	4
HPHY 684	Kinematics of Human Movement	4
OSU Campus		
BIOE 540	Bioconjugation	3
BIOE 545	Surface analysis	3
BIOE 557	Bioreactors	3
BIOE 562	Bioseparations	3
ECE 599	Bioelectronic Systems and Devices	3
CS 546	Networks in Computational Biology	3
CS 519	Algorithms for Computational Molecular Biology	3
CS 584	Human Factors Programming Languages	4
IE 545	Human Factors Engineering	4
IE 546	Human Factors Engineering II	4
ROB 567	Human-Robot Interaction	4
ROB 562	Human Control Systems	4
KIN 523	Biomechanics of Motor Activities	3
KIN 525	Biomechanics of Musculoskeletal Injury	3
CE 554	Driving Simulation	3
H 594	Applied Ergonomics	3
H 599	Advanced Ergonomics	3
ME 513	Bio-Inspired Design	4
NSE 583	Radiation Biology	3
VMB 631	Mathematical Modeling of Biological Systems	3

Biomedical Sciences:

Course Number	Course Title	Credits
UO Campus		
CH 561	Biochemistry	4
CH 562	Biochemistry	4
CH 563	Biochemistry	4
CH 564	RNA Biochemistry	4
CH 565	Physical Biochemistry	4
CH 566	Structural Biochemistry	4
BI 523	Human Molecular Genetics	4
BI 524	Advanced Molecular Genetics	4
BI 526	Genetics of Cancer	4
BI 527	Molecular Genetics of Human Disease	4
BI 528	Developmental Genetics	4
BI 563	Cellular Neuroscience	4
BI 566	Developmental Neurobiology	4
OSU Campus		
VMB 521	Animal Models	3
VMB 524	Bioanalytical Chemistry	3
VMB 670	Introduction to Systems Biology	2
VMB 671	Molecular Tools	3
VMB 673	Comparative Immunology	3
VMB 674	Vaccines and New Therapies	3
BB 585	Applied Bioinformatics	3
MCB 525	Techniques in Molecular and Cellular Biology	4
MCB 554	Genome Structure, Organization and Maintenance	4
MCB 555	Genome Expression and Regulation	4
MCB 576	Introduction to Computing in the Life Sciences	3
PHAR 525	Foundations of Drug Action I	3
PHAR 574	Nanomedicine	3

Mathematics and Statistics:

Course Number	Course Title	Credits
UO Campus		
MATH 521M	Partial Differential Equations: Fourier Analysis I	4
MATH 522	Partial Differential Equations: Fourier Analysis II	4
MATH 561	Introduction to Mathematical Models of Statistics I	4
PHYS 581	Design of Experiments	4
OSU Campus		
ST 515	Design and Analysis of Planned Experiments	3
ST 592	Statistical Methods for Genomics Research	3
MTH 528	Stochastic Elements in Mathematical Biology	3
ME 526	Numerical Methods for Engineering Analysis	3

Engineering Fundamentals:

Course Number	Course Title	Credits
UO Campus		
PHYS 611	Theoretical Mechanics	4
PHYS 612	Theoretical Mechanics	2
PHYS 613	Statistical Physics	2
PHYS 614	Statistical Physics	4
OSU Campus		
ECE 564	Digital Signal Processing	4
ME 546	Convection Heat Transfer	3
ME 565	Incompressible Fluid Mechanics	3
CHE 520	Mass Transfer	4
CHE 537	Chemical Engineering Thermodynamics	4

Innovation and Entrepreneurship:

Course Number	Course Title	Credits
UO Campus		
MGMT 625	New venture planning	3
MGMT 645	New Venture Scaling	3
MGMT 655	New Venture Execution	4
BA 661	Advanced Strategy and Leadership	3
BE 625	Business Law and Ethics	3
FIN 671	Corp finance and valuation	3
FIN 685	Venture Capital	3
J 548	Advertising campaigns	3
J 624	Strategic communication	3
J 626	Strategic marketing communication	3
LAW 610	Startup Business	3
LAW 610	Social entrepreneurship law	3
LAW 633	Business planning	3
LAW 673	Patent law and policy	3
MGMT 510	Technology and innovation management	3
MGMT 612	Managing Individuals and Organizations	3
MGMT 614	Strategic Management	3
MGMT 615	Leadership	3
MGMT 620	Global Business	3
MGMT 623	Negotiation	3
MGMT 640	Sustainable Business Development	3
MKTG 612	Marketing Management	3
MKTG 660	Marketing research	3
OBA 510	Predictive Analytics	3
OBA 510	Python Data Analysis	3
OBA 544	Business Database Management Systems	3
PPPM 581	Fundraising for non-profits	3
PPPM 685	Social enterprise	3
SBUS 645	Sports products	3
SPD 650	Sports product materials and manufacturing	3

(Title)

by
(Student Name)

A (DISSERTATION or THESIS)

submitted to

Oregon State University
and
University of Oregon

in partial fulfillment of
the requirements for the
degree of

(Degree)

Presented (Final Exam Date)
Commencement June (2024)

CBEE Graduate Degree Programs
Graduate Student Academic Progress

The process for evaluating Academic Progress for graduate students in the School of CBEE **may** include 3 steps (in chronological order through academic year):

1. Graduate Competency List (complete at first assessment, revise as necessary at end of each assessment) - *page 3*
2. Assessment of Graduate Student Academic Progress (due at each assessment) - *page 4-5*
3. Graduate Education Performance Plan (following an unsatisfactory assessment) - *page 6*

Definition of Satisfactory Academic Progress

Satisfactory progress toward completing a graduate degree in CBEE graduate programs requires:

- An annual written assessment showing adequate progress in coursework, development and/or writing of thesis/dissertation as evaluated by the major professor and the rest of the student's graduate committee,
- Maintaining a GPA of 3.00 or higher for all courses taken as a graduate student,
- Successfully passing relevant exams outlined by the Graduate School and the CBEE program,
- Timely* compliance with all Graduate School and programmatic requirements** for committee formation, committee meetings, project proposal, submission of forms and information, participation in seminars, and other activities expected of a student, scholar, and citizen.

**Students who are restricted from full course loads may negotiate a longer time frame in consultation with the Associate School Head for Graduate Programs and their major professor.*

***Students with overdue program materials may have holds placed on their registration by the Graduate School. They may not be eligible for funding opportunities such as the Laurels Block Grant Scholarship, COE Fellowships, and COE School level Awards.*

It is the responsibility of the student to write a self-assessment narrative (attach separate page), arrange to meet with their major professor to review academic progress, and to submit the assessment package to the Graduate Coordinator no later than June 30th each year. The assessment package consists of the self-assessment narrative, any assessments written by committee members, and the signed and completed Assessment of Graduate Student Academic Progress form.

- Early in their program (e.g., during their third term of enrollment) students should collaborate with their major professor and graduate committee to establish standards and expectations of satisfactory progress for that student's program.
- Student progress will be assessed annually.
- An assessment of student academic progress is made by the student, the student's major professor and, if requested, by other members of the student's graduate committee. Any member of the committee may write an evaluation of student progress for inclusion in the assessment package, but this is optional.
- It is the responsibility of the student to write a self-assessment narrative, arrange to meet with their major professor to review academic progress, and to submit the assessment package to the Graduate Coordinator no later than June 30th each year. The assessment package consists of the self-assessment narrative, any assessments written by committee members, and the signed and completed Assessment of Graduate Student Academic Progress form.

Process:

- Each spring term, every graduate student in a CBEE graduate program will fill out the 'Completion of Milestones' section of the 'Assessment of Graduate Student Academic Progress' form (Pg 4) of this document) and attach a written self-assessment narrative. The student may want to discuss their advisor's expectations for various categories of progress or professional development prior to writing the self-assessment.

  Self-Assessment Narrative:

  The written self-assessment should summarize activities undertaken by the student since the last review and should address:
  - Progress on course work and timeline for courses remaining to be completed,
  - Brief description of the research topic and progress made,
  - Progress on writing the thesis/dissertation,
  - Reflection on goals from the previous year
  - Participation in career and professional development opportunities
  - Goals for the coming year
  - Any other relevant information, including any impediments to progress.
- The student will then schedule a meeting with the major professor to review the student's self-assessment, progress, and accomplishments over the past year. Participation from other graduate committee members may be requested by either the student or the major professor but is not required. If other committee members provide input the student should obtain their signature on the Assessment of Graduate Student Progress form.
- The major professor reviews the student's materials and then fills out and signs the Assessment of Graduate Student Academic Progress form. Although optional, the major professor (or any committee member) is strongly encouraged to document their assessment of the student's progress in writing for inclusion in the assessment. It should be noted that signing the assessment without any written assessment will indicate agreement with the student's written narrative. These written comments may be helpful to document expectations for the coming year. The student signs the form and is responsible for submitting the narrative and the signed and completed Assessment of Graduate Student Academic Progress form to the Graduate Program Coordinator for inclusion in the student's permanent record **by June 30th** each year.
- If the student's progress is unsatisfactory, the student will work with the major professor to develop a Graduate Education Performance Plan (page 6) that contains measurable milestones for assessing student's academic progress over the course of the year. The plan will also be reviewed and signed by the - and filed in the student's permanent record.

CBEE Graduate Degree Programs

Graduate Competency List

Disciplinary skills and knowledge

Knowledge of a student's chosen field of study, and closely related fields, including history and trends in major findings, concepts, theories, approaches, and context.

Transdisciplinary/interdisciplinary skills and knowledge (biophysical and social sciences)

Knowledge of the relationship of the student's field/s of study to social and/or biophysical sciences, and approaches for integration and synthesis during research, outreach, and teaching. For social science students, the emphasis is on knowledge of biophysical sciences and how to use them to analyze and interpret information. For biophysical science students, knowledge of social sciences and how to use them to analyze and interpret information.

Communication skills (oral, written, pedagogy, professional)

Ability to write and speak to diverse audiences in an organized and clear fashion about relevant areas of expertise, both disciplinary and inter/transdisciplinary. Ability to modify oral and written communications for specific audiences. Knowledge of contemporary electronic tools for communication, such as for supporting lectures, social media, and blogs.

Critical thinking skills

Ability to evaluate the quality, context, scale, and biases in information, and to synthesize diverse kinds of information, in written and oral forms. Capacity for real-time discussion of biophysical and social systems and their interactions.

Research skills (quantitative, qualitative)

Knowledge sufficient to understand the use of quantitative and qualitative summaries of data as evidence for conclusions and scientific inference. This can include skills and knowledge with statistical, mathematical, graphical, and process models sufficient to plan, implement, analyze, and interpret research.

Research ethics

Knowledge of processes and guidelines for assuring that research is conducted in socially and professionally acceptable and legal ways while minimizing and managing conflicts of interest. Topics of relevance may include conducting general ethics, peer review, bias during data analysis and presentation, plagiarism, animal welfare, treatment of human subjects, collaboration, and authorship.

Policy analysis/interpretation

Knowledge of the laws, regulations, social institutions, and governance processes relevant to the application of a student's disciplinary and/or inter/transdisciplinary areas of study.

Teaching (PhD only)

Knowledge of contemporary, relevant STEM teaching methods, and experience in their application in classrooms, online, and technical/professional environments. Experience in the development of a classroom and/or online course, including development of a course syllabus that includes learning outcomes, lectures, laboratories, student assignments, and evaluation methods.

The **competencies are *not* course requirements**. Rather they can be acquired in a variety of ways. Life experiences, field experiences, extra-curricular activities, and independent study are all examples of how a competency could be met. Students and their advisor should discuss the competency list, mark off those that the student meets, and write up a plan to meet any remaining. **Please write a plan to meet the unmet competencies below:**

CBEE Graduate Degree Programs

2. Assessment of Graduate Student Academic Progress

To be filled out by the student

Student's name:_____ Date:_____

Date entered CBEE graduate program:_____ Degree program (check one): M.S. Ph.D.

Program:_____ Date of expected completion:_____

Major Professor

_____ _____

Committee Member

_____ _____

_____ _____

_____ _____

Checklist: (Complete those that apply to you; please fill in all dates that are applicable even if it's your best guess)

COMPLETION OF MILESTONES	TIMELINE	DATE COMPLETED OR EXPECTED
M.S. Degree		
Establish Graduate Committee	Spring of year 1	
Program of Study submitted to the Grad School	Spring of year 1	
Schedule final defense	At least 2 weeks before event	
Ph.D. Degree		
Establish Graduate Committee	Fall of year 2	
Qualifying Exam	Fall of year 2 (CHE/ENVE only)	
Program of Study Meeting / Submit PoS	Winter of year 2	
Preliminary Exam	After approval of the Program of Study and completing most of the course work. BIOE - Spring of year 2 CHE - Fall of year 3 ENVE - Year 3	
Schedule final defense	At least one quarter after the preliminary exam and at least two weeks before the event	

Progress form

2. Major Professor Assessment of Progress:

Major professor(s): Please discuss your responses with your student.

YES	NO	QUESTION
		Student is making satisfactory progress in completing their coursework.
		Student is making satisfactory progress in research
		Student is making satisfactory progress in the writing of their thesis/dissertation.
		Student has participated in professional and/or career development opportunities

3. Signatures:

I have reviewed the student's milestones (above) and self-assessment narrative, have completed the 'Major Professor Assessment of Progress' (left), and confirmed that the student understands my responses.

_____ _____

_____ _____

Major Professor Signature(s) Date

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

Committee Member Signature(s) (required for year 2 and beyond) Date

I understand my major professor(s)' and committee's assessment of my progress (left). I am now submitting this fully completed form to the Graduate Coordinator with my self-assessment narrative attached.

_____ _____

Student Signature Date

This completed form must be attached to the self-assessment narrative and submitted to the CBEE Graduate Coordinator before June 30th each year.

The student, the major advisor, and the committee members (GCR attendance is optional) should meet to discuss the annual assessment and the student's academic progress:

- **Following an unsatisfactory assessment**
- **If the student or the major advisor requests a meeting.**

Graduate Student Self-Assessment Narrative

The self-assessment conveys progress since the last assessment cycle and should include the following:

1. Progress on coursework and timeline for courses remaining to be completed,
2. Brief description of research topic and progress made,
3. Progress on writing the thesis/dissertation,
4. Reflection on goals from the previous year (if any)
5. Participation in career and professional development opportunities
6. Goals for the coming year
7. Any other relevant information, including any impediments to progress.

CBEE Graduate Degree Programs

3. Graduate Education Performance Plan

This form is intended to monitor a student's performance towards degree completion **resulting from an unsatisfactory review** at an annual assessment. This form should outline mutually agreed-upon (between student and major professor) benchmarks of performance.

Student_____

Major Professor_____

Plan (Identify deficiencies and outline a plan and timeline to remedy them):

Benchmarks (Criteria used to evaluate progress):

Signatures

_____Date_____

Student

_____Date_____

Major Professor

_____Date_____

Associate Head for Graduate Programs