

GRADUATE STUDENT GUIDELINES

DEPARTMENT OF ENVIRONMENTAL
&
PLANT BIOLOGY

OHIO UNIVERSITY

EFFECTIVE
SUMMER SEMESTER 2014

Revised: April 2015 (JLD)

PREFACE

In the case of conflicting regulations and procedures, those of the College of Arts and Sciences and the Graduate College supersede those listed here. Regulations listed in the [Graduate Catalog](#) are binding at the time of admission.

The graduate committee will review this document at least every three years. It is the student's responsibility to become aware of the procedures of the Department of Environmental and Plant Biology and the specific requirements and deadlines for each degree.

Students in the MCB program should also consult the Memo of Understanding for requirements of that program at <http://www.ohio.edu/mcb/curriculum>.

INTRODUCTION

The purpose of a graduate education is to obtain the knowledge and skills necessary to master a highly specialized discipline. Although coursework is emphasized in the following set of rules and procedures, it represents only a part of the training and goals of the program. Most of the lasting knowledge and meaningful experience of a graduate student is gained through independent study, scholarly interactions with faculty and other students, and original research.

The graduate program emphasizes research, and graduate students are expected to demonstrate significant motivation, initiative, and resourcefulness in the pursuit of publishable research. Masters students should devote at least as much time and effort to research as to coursework, whereas a Ph.D. is dominated by research and related professional activities. However, research expectations vary by discipline and advisor. Therefore, the student-advisor relationship can be a major factor contributing to the student's success in the discipline.

PBIO forms: <http://www.plantbio.ohiou.edu/index.php/resources/forms/>

CAS forms: <http://www.ohio.edu/cas/dean/graduate-studies/forms.cfm>

Thesis and Dissertation Services: <http://www.ohio.edu/graduate/etd/>

DEPARTMENTAL SUPPORT

I. M.S. Degree (PBIO-Thesis or PBIO-MCB)

- A. Eligible for support up to the student's first six (6) semesters (i.e. 2 years, including summer) as a Teaching Associate (TA), including a tuition waiver.
- B. Additional semester of support *may* be made available, but it is not guaranteed. Requires a letter of application before the end of the student's 5th semester (including summer) to the PBIO Graduate Committee along with a supporting letter from the advisor. The letter of application must contain a compelling explanation for additional support (e.g. experiment was delayed due to circumstances beyond the student's control).

II. Ph.D. Degree

- A. Without a MS degree: Eligible for support as a TA up to the student's first sixteen (16) semesters (i.e. 5 years + 1 semester, including summer), including a tuition waiver.
- B. With a MS degree: Eligible for support as a TA up to the student's first thirteen (13) semesters (i.e. 4 years + 1 semester, including summer), including a tuition waiver.

III. Conditions for Departmental Support

- A. Must be a full-time student (12 to 15 CR) in PBIO or MCB/PBIO graduate program.
- B. Must maintain a GPA ≥ 3.0 . May dip below this mark, but for only one semester.
- C. Must make satisfactory progress towards your degree as determined by your advisor and committee. This includes, but not limited to, meeting important deadlines and submitting a progress report every academic year.
- D. Must have a track record of satisfactory performance on TA assignments.
- E. Ph.D. students must earn a passing grade on comprehensive exams.
- F. Must successfully complete Chemical Hygiene Training.

Note: Having a RA or fellowship will not extend TA departmental support beyond the stated time limits.

M.S. DEGREE (PBIO)

I. Important deadlines

- A. End of 1st semester – [Course Approval Form](#) to Graduate Chair
- B. End of 2nd semester – Thesis Proposal approved by Thesis Committee. Turn in signed [Proposal Approval Form](#) to Graduate Chair.
- C. Sixth semester (Graduate semester) – Apply to graduate, enroll in PBIO 6950 and PBIO 6970
 - 1. Submit thesis to committee at least 2 weeks prior to defense and provide thesis title and abstract to office staff.
 - 2. Check [TAD](#) for their deadlines.
 - 3. Submit CAS#8 ([Report of the Oral Thesis Examination/Dissertation Defense](#)) to Graduate Chair.
- D. End of every spring semester – Graduate Student Progress Report.

II. Graduation Requirements

- A. A minimum of 20 PBIO graduate hours of graded course work, excluding seminar, supervised study, colloquium, and research. Courses will be determined by the student and the advisor and signed by the Graduate Chair.
- B. Successful completion of Biological Research and Science Ethics (PBIO 5170).
- C. One course for each of the three sub-disciplines listed below:

ORGANISMAL BOTANY:

- PBIO 5080 Structural Botany (4)
- PBIO 5090 Plant Systematics (4)
- PBIO 5100 Fungi (3)
- PBIO 5190 Ohio Flora (3)
- PBIO 5200 Phycology (4)
- PBIO 5750 Plant Population Genetics & Speciation (3)

CELL/MOLECULAR BIOLOGY:

- PBIO 5240 Plant Physiology (3)
- PBIO 5280 Genomics Lab (3)
- PBIO 5300 Plant Genetics (3)
- PBIO 5310 Cell Biology (3)
- PBIO 5500 Biotechnology & Genetic Engineering (3)

PLANT ECOLOGY:

- PBIO 5220 Tropical Plant Ecology (3)
- PBIO 5260 Physiological Plant Ecology (4)
- PBIO 5330 Restoration Ecology (3)

PBIO 5350 Population & Community Ecology (4)

PBIO 5380 Soils & Ecosystems (4)

- D. Courses that are highly recommended, but do not meet the sub-discipline requirement:
- PBIO 5010 Lab in Cell and Molecular Plant Physiology (Lab CaMPP) (2)
 - PBIO 5020 Soil Microbial Analysis Lab (2)
 - PBIO 5095 Field Studies in Plant Diversity (3-6)
 - PBIO 5150 Statistical Methods in Plant Biology (4)
 - PBIO 5160 Problem Solving with Bioinformatics Tools (3)
 - PBIO 5180 Writing in the Life Sciences (3)
 - PBIO 8700 Biostatistics II (3)
- E. A minimum of 10 hours of research (PBIO 6940).
- F. Successfully completion of two semesters of PBIO 6970 (Seminar) or giving a research presentation at Ecolunch in BIOS or MCB seminar.
- 1. The student must enroll in seminar during the semester in which s/he is defending her/his research. The pre-defense seminar is graded by the thesis committee and satisfies one of the two required PBIO 6970 (seminar) courses.
- G. One grade of “C+“ or below will result in academic probation. A GPA below 3.0 in two consecutive academic semesters, two grades of “B-“ or below or one grade of “C-“ or below in graduate courses will result in dismissal from the graduate program.
- 1. The student should inform his/her advisor and the Graduate Chair before withdrawing from a course because it may impact departmental support.
- H. Must complete a research thesis with the intent of publication in a peer-reviewed journal and successfully defend the thesis orally (see Section V below).

III. Program of Study

- A. All new students will report to the graduate chair for initial instructions.
- B. A student may be co-advised by two PBIO tenure-track faculty members.
- C. A student may change advisors, but only after approval of the current and potential advisor, and the Graduate Chair. If a student leaves his/her advisor, for whatever reason, s/he must find another advisor within four weeks or before the start of the following semester.
 - 1. An unadvised student cannot remain in the PBIO graduate program beyond this time limit.

IV. M.S. Thesis Committee and Proposal

- A. The advisor will chair the thesis committee with two other appropriate faculty members; one must be a PBIO tenure-track faculty member.

- B. The student will present a draft thesis proposal to the advisor at the beginning of the second semester for comment. At this time, the student needs to select the thesis committee.
- C. No later than the end of the second semester, the thesis committee must unanimously approve the research proposal by signing the [PBIO Proposal Defense Form](#). The form should be presented to the Graduate Chair along with a hard copy of the proposal.
- D. If the research project changes substantively (i.e., hypothesis or experimental design), the student must submit an updated proposal and seek approval of the committee.

V. M.S. Thesis

- A. The student should meet once a semester with each committee member for informal progress reports.
- B. The thesis must use the format provided by the Thesis and Dissertation Services (TAD) by using the template provided by [TAD](#).
- C. The M.S. thesis must be submitted to the committee at least two weeks before the examination date. The committee must approve the examination date.
- D. The thesis will be orally defended in a formal, public presentation. After the public presentation, the committee will conduct a closed-door defense to thoroughly evaluate the quality of the research. At this time, the committee will provide constructive comments to improve unsatisfactory sections.
 - 1. This public presentation defense will be the student's second PBIO 6970.
 - 2. The student should obtain copies of the [Graduate Seminar/Final Seminar Critique Form](#) from the departmental website and distribute them to his/her committee.
- E. The oral defense must be approved unanimously, as evident by presenting a committee signed CAS#8 (Report on the [Oral Thesis Examination Defense](#)) to the Graduate Chair.
 - 1. If a student receives only two passes, the committee, advisor, and student should work together in an attempt to satisfy the dissenting opinion via revision or additional work.
 - 2. If a student receives less than two passes, a report of the thesis examination (indicating that the student has failed) will be submitted and the student will be dismissed from the graduate program.
- F. A PDF of the finalized thesis will be submitted to TAD, along with CAS#8.

VI. Changing Programs

- A. A M.S. student can request a transfer into the doctoral program by submitting an application of transfer to the graduate committee at the start of his/her third semester, including summers.
1. This application will contain:
 - a) A detailed letter of support from his/her advisor.
 - b) A letter by the student providing a compelling reason for the transfer and why it is necessary in the context of his/her career goals.
 2. The student will still be required to take a class from each of the sub-disciplines.
 3. The Graduate Committee will make the final admission decision. If positive, the student will be transferred to Ph.D. program for the following academic semester.

M.S. DEGREE (PBIO-MCB)

VII. Important deadlines

- A. End of 1st semester – [Course Approval Form](#) to Graduate Chair
- B. End of 2nd semester – Thesis proposal approved by MAC. Turn in signed Proposal Approval Form to Graduate Chair.
- C. End of 3th academic semester – Comprehensive exam finished.
- D. Sixth semester (Graduate semester) – Apply to graduate
 - 1. Submit thesis to committee at least 2 weeks prior to defense and provide thesis title and abstract to office staff.
 - 2. Check [TAD](#) for their deadlines.
 - 3. Submit CAS#8 ([Report of the Oral Thesis Examination/Dissertation Defense](#)) to Graduate Chair
- E. End of every spring semester – Graduate Student Progress Report.

VIII. Graduation Requirements

- A. A minimum of 20 graded hours of coursework at the graduate level, with at least 10 credit hours in PBIO, and excluding seminar, supervised study, colloquium, and research. Courses will be determined by the student and the advisor and approved by the Masters Advisory Committee.
- B. Successful completion of:
 - 1. Biochemistry (CHEM 5901 or CHEM 5890)
 - 2. Biological Research and Science Ethics (PBIO 5170).
- C. One course in:
 - MCB 7200 Molecular Biology (3)
 - MCB 7300 Molecular and Cellular Biology Laboratory (3)
 - PBIO 5310 Cell Biology or MCB 7600 Advanced Cell Biology (3)
- D. Courses that are recommended:
 - PBIO 5010 Lab in Cell and Molecular Plant Physiology (Lab CaMPP) (2)
 - PBIO 5150 Statistical Methods in Plant Biology (4)
 - PBIO 5160 Problem Solving with Bioinformatics Tools (3)
 - PBIO 5180 Writing in the Life Sciences (3)
 - PBIO 8700 Biostatistics II (3)
- E. A minimum of 10 hours of research (PBIO 6940).
- F. Successfully completion of two semesters of MCB 7410 (Seminar in MCB) each year.

- G. Must maintain a 3.0 GPA to remain in the MCB program and to Graduate. If a student receives a grade of C+ or less in more than two courses, s/he will be terminated from the MCB program.
 - 1. The student **should** inform his/her advisor and the Graduate Chair (PBIO & MCB) before withdrawing from a course because it may impact departmental support.
- H. Must complete a research thesis with the intent of publication in a peer-reviewed journal and successfully defend the thesis orally (see Section V below).

IX. MS (MCB) Program of Study

- A. All new students should first consult the [Memo of Understanding](#) for details of the MS in MCB.
- B. A student may change advisors, but only after approval of the current and potential advisor, and the Graduate Chair. If a student leaves his/her advisor, for whatever reason, s/he must find another PBIO MCB advisor within four weeks or before the start of the following semester.

An unadvised student cannot remain in the graduate program beyond this time limit.

X. Master's Advisory Committee (MAC) and Proposal

- A. The thesis advisory committee will contain four faculty members: the advisor (as chair) and at least one additional member from the home department. At least three committee members must be faculty in MCB, and at least one committee member must be outside the student's home department.
- B. No later than the end of the second semester (excluding summers), the thesis committee must approve the research proposal by signing the [PBIO Proposal Defense Form](#). The form should be presented to the PBIO Graduate Chair along with a hard copy of the proposal.
- C. If the research project changes substantively (i.e., hypothesis or experimental design), the student must submit an updated proposal and seek approval of the committee.

XI. MS (MCB) Written Comprehensive Examination

- A. Must be completed before the end of the third academic semester.
 - 1. Failure to take the exam on time will likely result in termination of funding and/or dismissal from the program.
 - 2. An examination may be repeated no more than one time.
 - a) Retakes must be completed by end on fourth semester.

- b) Failure to pass all examination after any second attempts will result in termination in the MCB Program.
- B. Eligibility to take the Comprehensive Examination:
 - 1. An approved research proposal.
 - 2. Good academic standing.
- C. The Master's Advisory Committee will provide the questions for the exam.
 - 1. The student should contact her/his examiners the semester before the exam to discuss expectations, exam format, and to receive reading assignments.
 - 2. The student will be notified in writing the results within one week of the exam.

XII. M.S. (MCB) Thesis

- A. The student should meet once a semester with each committee member for informal progress reports.
- B. The thesis must use the format provided by the Thesis and Dissertation Services (TAD) by using the template provided by [TAD](#).
- C. The M.S. thesis must be submitted to the committee at least two weeks before the examination date. The committee must approve the examination date.
- D. The thesis will be orally defended in a formal, public presentation. After the public presentation, the committee will conduct a closed-door defense to thoroughly evaluate the quality of the research. At this time, the committee will provide constructive comments to improve unsatisfactory sections.
 - 1. The student should obtain copies of the [Graduate Seminar/Final Seminar Critique Form](#) from the departmental website and distribute them to his/her committee.
- E. The oral defense must be approved unanimously, as evident by presenting a committee signed CAS#8 (Report on the [Oral Thesis Examination Defense](#)) to the Graduate Chair.
 - 1. If a student receives only two passes, the committee, advisor, and student should work together in an attempt to satisfy the dissenting opinion via revision or additional work.
 - 2. If a student receives less than two passes, a report of the thesis examination (indicating that the student has failed) will be submitted and the student will be dismissed from the graduate program.
- F. A PDF of the finalized thesis will be submitted to TAD, along with CAS#8.

Ph.D. DEGREE (P BIO)

I. Important deadlines

- A. End of 2nd semester – [Course Approval Form](#) to Graduate Chair.
- B. Beginning of 4th semester – [Dissertation Committee Information](#) (CAS#5) to Graduate Chair.
- C. End of 4th academic semester – Dissertation Proposal approved by Dissertation Committee, Dept. [Proposal Approval Form](#) to Graduate Chair.
- D. End of 6th academic semester – Comprehensive exam finished, [Recommendation to Advance Student to Candidacy for PhD Degree](#) (CAS#6) to Graduate Chair.
- E. Graduation semester – Apply to graduate, enroll in P BIO 6970
 - 1. Submit dissertation to committee at least 2 weeks prior to defense and provide thesis title and abstract to office staff.
 - 2. Check [TAD](#) for their deadlines.
 - 3. Submit Report of the [Oral Thesis Examination/Dissertation Defense](#) (CAS#8) to Graduate Chair.
- F. End of every spring semester – Graduate Student Progress Report.

II. Graduation Requirements

- A. Successful completion of Biological Research and Science Ethics (P BIO 5170).
- B. A student without a M.S. degree must take a minimum of 30 graded graduate credit hours, of which 20 must be P BIO.
- C. A student with a M.S. degree must take a minimum of 21 graded graduate credit hours, of which 12 must be P BIO.
- D. Graded graduate credit hours course excludes seminar, supervised study, colloquium, and research. Courses will be determined by the student and the advisor, with recommendation by the graduate committee, and signed by the Graduate Chair.
- E. A Ph.D. student with a M.S. degree must take one (1) course, whereas a Ph.D. student without a M.S. degree must take two (2) courses from:
 - P BIO 5150: Statistical Methods in Plant Biology (4)
 - P BIO 5160: Problem Solving with Bioinformatics Tools (3)
 - P BIO 5180: Writing in the Life Sciences (3)
 - P BIO 8700: Biostatistics II (3)
 - GEOG 5730: Principles of GIS (4)

- F. A GPA below 3.0 in two consecutive academic semesters, two grades below “B-“, or one grade below a “C-“ in graduate courses will result in dismissal from the graduate program. One grade below a “C+“ will result in academic probation.
 - 1. The student should inform his/her advisor and the Graduate Chair before withdrawing from a course because it may impact departmental support.
- G. A minimum of 60 credits hours of research (PBIO 8950)
- H. Successful completing four semesters of PBIO 6970 (Seminar) or completing three Seminars and giving a research presentation at Ecolunch in BIOS or MCB seminar.
 - 1. The student should enroll in seminar during the semester in which s/he is defending her/his research. The pre-defense seminar is graded by the thesis committee and satisfies one of the four required PBIO 6970 (seminar) courses.
- I. Must pass a Comprehensive Examination composed of written and oral sections no later than the third year (i.e., 9th semester, including summers) or face dismissal from the program.
- J. Must successfully complete a research dissertation, with the intent of submitting multiple publications to peer-reviewed journals.
- K. Must orally defend a research dissertation.

III. Program of Study

- A. All new students will report to the Graduate Chair for initial instructions.
- B. A student may be co-advised by two PBIO tenure-track faculty members.
- C. A student may change advisors, but only after approval of the current and potential advisor, and the Graduate Chair. If a student leaves his/her advisor, for whatever reason, s/he must find another advisor within four weeks or before the start of the following semester.
 - 1. An unadvised student cannot remain in the PBIO graduate program beyond this time limit.

IV. The Dissertation Committee

- A. Will advise the student of courses and requirements, conduct the comprehensive exam, approve the dissertation research proposal, and conduct the PhD exam for approval of the dissertation.
- B. Will be chaired by the student’s advisor and must have at least four tenure-track faculty, at least two (2) from PBIO and a Graduate Faculty Representative of the College of Arts and Sciences.
 - 1. The Graduate Faculty Representative cannot be a faculty member in the Department of Environmental & Plant Biology and must be approved by the Dean of the College of Arts and Sciences.

2. Names must be submitted to the Graduate Chair for Approval ([Dissertation Committee Information form](#)) and submission to the Dean of the College of Arts and Sciences.

V. Dissertation Proposal

- A. The dissertation proposal must describe a comprehensive, multi-study research project.
- B. The student must meet with her/his dissertation committee no later than the end of the 4th academic semester to discuss the proposal.
 1. This meeting should, but does not necessarily need to be, a formal meeting for proposal approval.
 2. The purpose of this meeting is to determine research direction and progress and to offer constructive criticism and suggestions on proposal improvement.
- C. The dissertation committee must unanimously approve the research proposal by signing the PBIO Proposal Defense Form.
 1. The form should be presented to the Graduate Chair along with a hard copy of the proposal.
- D. If the research project changes substantively (i.e., hypothesis or experimental design), the student must submit an updated proposal and seek approval of the committee.
- E. An approved proposal will make the student eligible to take the comprehensive exam.

VI. Comprehensive Examination

- A. Will contain a written and oral section.
- B. Must be completed before the end of the third year of study (9th semester, including summers) and will be planned and organized by the student and advisor.
 1. Failure to take the exam will likely result in termination of funding and/or dismissal from the program.
- C. Eligibility to take the Comprehensive Examination:
 1. Minimum 3.0 GPA for all graduate courses.
 2. Completion of all course requirements from the course approval form or permission from the Graduate Chair.
 3. An approved research proposal.
- D. At least four members of the Dissertation Committee will be the examiners for the exam.

1. The student should contact her/his examiners the semester before the exam to discuss expectations, exam format, and to receive reading assignments.
 2. The Graduate Faculty Representative of the College of Arts and Sciences may choose not to participate. Another faculty member from the Department of Environmental & Plant Biology may substitute for one of the Dissertation Committee members.
- E. Written section:
1. Each examiner will prepare a written examination.
 2. The examinations will be scheduled over the course of one week with four hours allotted for each exam.
 3. If an examiner elects to grade numerically, 70% will be considered a passing score.
 4. Results of written examination will be communicated to the student and Graduate Chair by the advisor.
 5. A student receiving no more than one failing vote in the written section will be permitted to take the oral section.
- F. Oral section:
1. Prior to the oral examination, the student will meet with each of the examiners to discuss the results of the written section, withholding the student's answers. The answers will become part of the student's permanent record.
 2. The oral examination will take place within two weeks after the student and Graduate Chair have been notified of the results of the written section.
 3. Following the oral examination, each examiner will be asked to either pass or fail the student
 - a) All passes: The [Report of the Comprehensive Exam for the PhD](#) (CAS#4) form will be forwarded to the College of Arts and Sciences. The student may enter candidacy for the Ph.D. Degree (CAS#6).
 - b) Pass, one failing vote: The [Report of the Comprehensive Exam for the PhD](#) (CAS#4) form will be forwarded to the Graduate chair, but not dated and not signed by the Graduate Chair or one examiner.
 - (1) Once the examiner is satisfied, CAS#4 can be signed and dated by examiner and Graduate Chair and forwarded to CAS.
 - c) Fail, two failing votes: a report of the Comprehensive Examination indicating that the student has failed will be forwarded to the College of Arts and Sciences.
 4. If fail, the student can retake the exam (both written and oral) within six (6) weeks.
 5. A student who fails the Comprehensive Examination twice will be dismissed from the graduate program.

VII. Ph.D. Dissertation

- A. The student should meet once a semester with each committee member for informal progress reports.
 - 1. The committee must have the option to review a chapter prior to submission for publication. Review turnaround time is four (4) weeks.
- B. The dissertation must use the format provided by the Thesis and Dissertation Services (TAD) by using the template provided by [TAD](#).
- C. The Ph.D. Dissertation must be submitted to the committee at least two weeks (i.e. 14 days) before the examination date. The committee must approve the examination date.
- D. The dissertation will be orally defended in a formal, public presentation (e.g. PBIO colloquium). After the public presentation, the committee will conduct a closed-door defense to thoroughly evaluate the quality of the research. At this time, the committee will provide constructive comments to improve unsatisfactory sections.
 - 1. This public presentation defense can be the student's forth PBIO 6970.
 - 2. The student should obtain copies of the Graduate Seminar/Final Seminar Critique Form from the departmental website and distribute them to his/her committee.
- E. The oral defense must be approved unanimously, as evidenced by presenting a committee signed CAS#8 ([Report on the Oral Dissertation Examination Defense](#)) to the Graduate Chair.
 - 1. If a student receives only two passes, the committee, advisor and student should work together in an attempt to satisfy the dissenting opinion via revision or additional work.
 - 2. If a student receives less than two passes, a report of the thesis examination (indicating that the student has failed) will be submitted and the student will be dismissed from the graduate program.
- F. A PDF of the finalized thesis will be submitted to TAD, along with CAS#8.

Ph.D. DEGREE (PBIO-MCB)

I. Important deadlines

- A. End of 2nd semester – [Course Approval Form](#) to Graduate Chair.
- B. End of 2nd semester – [Dissertation Committee Information](#) (CAS#5) to Graduate Chair.
- C. End of 4th academic semester – Dissertation Proposal approved by Dissertation Committee, Dept. [Proposal Approval Form](#) to Graduate Chair.
- D. End of 6th academic semester – Comprehensive exam finished, [Recommendation to Advance Student to Candidacy for PhD Degree](#) (CAS#6) to Graduate Chair.
- E. Graduation semester – Apply to graduate, enroll in PBIO 6970
 - 1. Submit dissertation to committee at least 2 weeks prior to defense and provide thesis title and abstract to office staff.
 - 2. Check [TAD](#) for their deadlines.
 - 3. Submit Report of the [Oral Thesis Examination/Dissertation Defense](#) (CAS#8) to Graduate Chair.
- F. End of every spring semester – Graduate Student Progress Report.

II. Graduation Requirements

- A. Successful completion of:
 - PBIO 5170 Biological Research and Science Ethics (1)
 - CHEM 5901 and CHEM 5902 Biochemistry (4, each)
 - MCB 7200 Molecular Biology (3)
 - MCB 7300 Molecular and Cellular Biology Laboratory (3)
 - MCB 7600 Advanced Cell Biology (3)
 - PBIO 5180 Writing in Life Sciences (3)
 - PBIO 5150: Statistical Methods in Plant Biology (4)
 - or
 - PBIO 5160: Problem Solving with Bioinformatics Tools (3)
 - Two additional courses in PBIO
- B. Each student is required to complete a minimum of 30 graded graduate credit hours.
- C. Must maintain a 3.0 GPA to remain in the MCB program and to graduate. If a student receives a grade of C+ or less in more than two courses, s/he will be terminated from the MCB program.
- D. A minimum of 60 credits hours of research (PBIO 8950)

- E. Successful completion of MCB (7410) each year.
- F. Must pass a Comprehensive Examination composed of written and oral sections no later than the third year (i.e., 9th semester, including summers) or face dismissal from the program.
- G. Must successfully complete a research dissertation, with the intent of submitting multiple publications to peer-reviewed journals.
- H. Must orally defend a research dissertation.

III. Program of Study

- A. A student may be co-advised by two PBIO-MCB tenure-track faculty members.
- B. A student may change advisors, but only after approval of the current and potential advisor, and the Graduate Chair. If a student leaves his/her advisor, for whatever reason, s/he must find another advisor within four weeks or before the start of the following semester. An unadvised student cannot remain in the PBIO-MCB graduate program beyond this time limit.

IV. Doctoral Advisory Committee (DAC)

- A. Will advise the student of courses and requirements, conduct the comprehensive exam, approve the dissertation research proposal, and conduct the PhD exam for approval of the dissertation.
- B. Will be chaired by the student's advisor and must have at least four faculty members, at least three (3) of whom are MCB Faculty.
 - 1. At least one faculty member must not be associated with the graduate program of the home department.
 - 2. Names must be submitted to the Graduate Chair for Approval ([Dissertation Committee Information form](#)) and submission to the Dean of the College of Arts and Sciences.

V. Dissertation Proposal

- A. The dissertation proposal must describe a comprehensive, multi-study research project.
- B. The student must meet with her/his dissertation committee no later than the end of the 4th academic semester to discuss the proposal.
 - 1. This meeting should, but does not necessarily need to be, a formal meeting for proposal approval.
 - 2. The purpose of this meeting is to determine research direction and progress and to offer constructive criticism and suggestions on proposal improvement.

- C. The dissertation committee must unanimously approve the research proposal by signing the PBIO Proposal Defense Form. The form should be presented to the Graduate Chair along with a hard copy of the proposal.
- D. If the research project changes substantively (i.e., hypothesis or experimental design), the student must submit an updated proposal and seek approval of the committee.
- E. An approved proposal will make the student eligible to take the comprehensive exam.

VI. Comprehensive Examination

- A. Will contain a written and oral section.
- B. Must be completed before the end of the third year of study (6th semester, including summers) and will be planned and organized by the student and advisor.
 - 1. Failure to take the exam on time will result in termination of the MCB program.
- C. Eligibility to take the Comprehensive Examination:
 - 1. Minimum 3.0 GPA for all graduate courses.
 - 2. An approved research proposal.
- D. At least four members of the Dissertation Committee will be the examiners for the exam.
 - 1. The student should contact her/his examiners the semester before the exam to discuss expectations, exam format, and to receive reading assignments.
 - 2. The Graduate Faculty Representative of the College of Arts and Sciences may choose not to participate. Another faculty member from the Department of Environmental & Plant Biology may substitute for one of the Dissertation Committee members.
- E. Written section:
 - 1. Each examiner will prepare a written examination.
 - 2. The examinations will be scheduled over the course of 10 days, one or two per day.
 - 3. Results of written examination will be communicated to the student and Graduate Chair by the advisor.
 - 4. A student receiving no more than one failing vote in the written section will be permitted to take the oral section.
- F. Oral section:
 - 1. Prior to the oral examination, the student will meet with each of the examiners to discuss the results of the written section, withholding the student's answers. The answers will become part of the student's permanent record.

2. The oral examination will take place within two weeks after the student and Graduate Chair have been notified of the results of the written section.
3. Following the oral examination, each examiner will be asked to either pass or fail the student
 - a) All passes: The [Report of the Comprehensive Exam for the PhD](#) (CAS#4) form will be forwarded to the College of Arts and Sciences. The student may enter candidacy for the Ph.D. Degree (CAS#6).
 - b) Pass, one failing vote: The [Report of the Comprehensive Exam for the PhD](#) (CAS#4) form will be forwarded to the Graduate chair, but not dated and not signed by the Graduate Chair or one examiner.
 - (1) Once the examiner is satisfied, CAS#4 can be signed and dated by examiner and Graduate Chair and forwarded to CAS.
 - c) Fail, two failing votes: a report of the Comprehensive Examination indicating that the student has failed will be forwarded to the College of Arts and Sciences.
4. A student who fails the Comprehensive Examination twice will be dismissed from the graduate program.

VII. Ph.D. Dissertation

- A. The student should meet once a semester with each committee member for informal progress reports. The committee must have the option to review a chapter prior to submission for publication. Review turnaround time is four (4) weeks.
- B. The dissertation must use the format provided by the Thesis and Dissertation Services (TAD) by using the template provided by [TAD](#).
- C. The Ph.D. Dissertation must be submitted to the committee at least two weeks (i.e. 14 days) before the examination date. The committee must approve the examination date.
- D. The dissertation will be orally defended in a formal, public presentation (e.g. PBIO colloquium). After the public presentation, the committee will conduct a closed-door defense to thoroughly evaluate the quality of the research. At this time, the committee will provide constructive comments to improve unsatisfactory sections.
 1. The student should obtain copies of the Graduate Seminar/Final Seminar Critique Form from the departmental website and distribute them to his/her committee.
- E. The oral defense must be approved unanimously, as evidenced by presenting a committee signed CAS#8 ([Report on the Oral Dissertation Examination Defense](#)) to the Graduate Chair.
 1. If a student receives only two passes, the committee, advisor and student should work together in an attempt to satisfy the dissenting opinion via revision or additional work.

2. If a student receives less than two passes, a report of the thesis examination (indicating that the student has failed) will be submitted and the student will be dismissed from the graduate program.
- F. A PDF of the finalized thesis will be submitted to TAD, along with CAS#8.

GRIEVANCE PROCEDURES

I. Dismissal from Program

- A. A graduate student may be dismissed from the program for serious deviations from acceptable professional practices, including (but not restricted to) cheating, dishonesty, fabrication or falsification of research data, plagiarism, sexual harassment, careless behavior that threatens the well being of others, and vandalism.
- B. If a decision is made to dismiss a graduate student due to academic misconduct or poor performance, the Department Chair shall notify the student at least 30 days in advance of dismissal in writing. The reasons for the disciplinary action shall also be explained in writing.
 - 1. This is not required if the student is being dismissed for unsatisfactory performance in coursework or research; see “Graduation Requirements” under the individual degree programs in this document.

II. Cancellation of Assistantship

- A. A written warning will be issued notifying the student that her/his performance is unsatisfactory and may lead to contract cancellation if the situation is not rectified. The student’s performance will be reassessed at the end of the semester. If still unsatisfactory, the student shall be notified by the Department Chair, in writing, at least 30 days in advance of appointment cancellation.

III. Contesting Dismissal or Cancellation of Assistantship

- A. A student has the right to contest dismissal or appointment cancellation.
- B. A student may request a hearing with the Graduate Committee and the Department Chair. This request must be made in writing to the Department Chair within a week (7 days) following notification of dismissal or appointment cancellation.
 - 1. The Department Chair will then arrange a hearing, which will take place within 14 days of the student’s request.
- C. This is the final hearing of the appeal within the department.
- D. After the department hearing, the student may then contest the dismissal or appointment cancellation through normal university channels for appeal.

IV. Plagiarism

- A. Plagiarism will not be tolerated because it is one of the worst offences in academia.
- B. Faculty members are responsible to report all acts of plagiarism to the Department and Graduate Chair in writing, including evidence, within seven (7) days of the offence.

- C. On the first offence, the student will be placed on academic probation. The second offence will result in dismissal from the program.

V. Other Grievances

- A. Grievances can be brought for serious deviations from acceptable professional practices, included, but not restricted to, cheating, dishonesty, fabrication or falsification of research data, sexual harassment, verbal abuse, careless behavior that threatens the well being of others, and vandalism.
 - 1. By graduate students against faculty members or against other graduate students. Likewise, faculty can do the same to graduate students.
- B. In all cases, the burden of proof regarding any grievance rests upon the individual(s) bringing the grievance (the grievant).

VI. Departmental Procedures

- A. Grievants will attempt to resolve the grievance through informal discussions with the faculty member or graduate student charged.
- B. If no resolution of the grievance is obtained, the grievant will discuss the grievance with the Graduate Chair.
- C. If no resolution of the grievance is obtained, the grievant may request a formal hearing with the Graduate Committee and the Department Chair.
 - 1. This request, including a description of the charge, shall be made in writing to the department chair, who shall arrange a hearing to take place within 30 days of the grievant's request.
 - 2. The department chair must notify the person(s) against whom a charge is being brought in writing at least 20 days before the hearing.
 - 3. This is the final hearing of appeal within the department.
- D. Grievants who fail to obtain resolution of the grievance at the department level may pursue the grievance through normal university channels for appeal.

VII. Guidelines

- A. It is recommended that a written record be available of the proceedings of any formal grievance hearing.
- B. It is the student's responsibility to know departmental and college requirements. When a conflict occurs between catalog or guidelines and the advisor, the catalog or guidelines take precedence, unless a formal waiver has been obtained from the graduate chair.
- C. Sexual harassment laws require supervisors to take action when made aware of misconduct.