2016 – 2017 Student Handbook

Biological Sciences Graduate Program

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BIOLOGICAL SCIENCES (BISI) GRADUATE PROGRAM

This handbook provides the policies and procedures for the Biological Sciences Graduate Program. University policies, some of which are copied in this handbook, can be seen in their entirety on the Graduate School website: http://www.gradschool.umd.edu/catalog/

OVERVIEW OF GRADUATE PROGRAM

Program Structure

The Biological Sciences Graduate Program (BISI) is an interdepartmental umbrella graduate program that was established in 2009 and includes four areas of concentration:

- Behavior, Ecology, Evolution, and Systematics (BEES)
- Computational Biology, Bioinformatics, and Genomics (CBBG)
- Molecular and Cellular Biology (MOCB)
- Physiological Systems (PSYS)

The program's administrative structure includes a Director of Graduate Studies (DGS), an Associate Director of Graduate Studies (ADGS), and four concentration area (CA) directors. This core makes up the central Executive Committee (the ADGS is an ex officio, non-voting member of the group). The DGS reports to the chairs from the Departments of Biology (BIOL), Cell Biology & Molecular Genetics (CBMG), and Entomology (ENTM) and is responsible for the overarching goals of the program. The ADGS, with the assistance of a program coordinator, handles all of the administrative work and data management associated with the program. The CA Directors work with their faculty to develop the content and policies for each concentration area.

Admission

The admissions process for BISI is designed to determine whether the program is a good fit for the applicant's background, education, and research interests. Our goal is to ensure that admitted students will be successful in the program.

Admission to graduate study in the Biological Sciences (BISI) requires

- An earned Baccalaureate degree from an accredited college or university including coursework in calculus, physics, and organic chemistry,
- At least a 3.0 grade point average (on a 4.0 scale)
- One year of research experience
- Strong letters of recommendation from people that can speak to their academic and research strengths
- International applicants must also complete the Test of English as a Foreign Language exam.[1]

These characteristics describe many successful BISI applicants, however they are not fixed

[1] *Students who will be awarded a degree from the U.S., United Kingdom, Anglophone Africa, Anglophone Canada, Ireland, Australia, New Zealand, Singapore, and the Commonwealth Caribbean prior to enrolling in the University of*

metrics. During application review, we strive to look at the entire application to assess how well each applicant's academic background and research experiences and interests fit with the opportunities provided by our program.

Students are admitted to the Biological Sciences Graduate Program, but choose a concentration area that reflects their research interests. BISI has four concentration areas: BEES, CBBG, MOCB, and PSYS, each of which has its own independent admissions committee; final offers are determined by the BISI Executive Committee.

Students may find that their research interests overlap several of these concentration areas and, once admitted, are free to move from one area to another.

Outstanding students who lack preparation in particular areas may be admitted to the program, contingent upon prior arrangements made to correct said deficiencies with the Concentration Area Director, in consultation with the prospective student's faculty advisor and the Graduate Admissions committee. Any deficiencies identified will be required to be made up within two years of the entrance date.

Selection of an Advisor

Students may select an advisor prior to matriculation or may choose to do laboratory rotations during their first year to identify an appropriate lab. Students in the BEES and PSYS concentration areas often choose the former of these, but may also choose to do rotations if unable to decide on one particular lab.

Students are free to change advisors if it becomes appropriate to do so, but, after the first year, every student must have a committed faculty advisor(s) to remain in the Program.

Research with Animals or Humans

Campus and Federal requirements stipulate that any research project using animals or humans must be approved by the appropriate Campus committees prior to the initiation of research. This applies not only to research being conducted on campus, but also to all research conducted by UMD faculty or students at other sites around the world. **Research conducted off-campus, even if covered by an approved protocol at the off-campus site, must also be approved by our campus committees. Students should discuss approvals with their on campus advisors before beginning research.**

Responsible Conduct of Research

All students are required to take a Bioethics course during their time in the Biological Sciences Graduate Program. This course is usually taken during the student's first year in the program. NSF supported students are also required to renew their training every four years. This can be via an approved workshop or online course. More information (including the full University of Maryland policy) on RCR training and workshops and programs approved for this training can be found on the University research website at: http://www.umresearch.umd.edu/RCR/.

Degree Programs

There are three graduate degree options offered by the Biological Sciences Graduate Program: a Ph.D., a non-thesis Master's, and a thesis Master's. The detailed requirements for each program are described below.

REQUIREMENTS FOR THE DOCTOR OF PHILOSOPHY IN BIOLOGICAL SCIENCES

The Ph.D. program is primarily a research-oriented program. It is designed to provide maximal opportunity for students to evolve and develop their capacity for scholarship and independent work. The program is individually tailored to each student to enable them to explore a specific area of research "in-depth", and to make an original contribution to that particular field of science. Because the program is designed individually, it may be modified as research evolves.

Advisement

Due to the individual nature of the Ph.D. program, the Faculty Advisor-Graduate Student relationship is fundamental to the education and growth of the graduate student. It is important to remember that this relationship will be an integral part of your life not only while in graduate school, but also as you continue your life as a scientist. Your advisor should be your advocate as you look for permanent work after graduation and be able to guide you in this search. Look for an advisor whose temperament, teaching style, and research mentorship complement your learning and working style. Look for a research group that you feel is supportive and provides you with the intellectual challenge that will inspire you. Lastly, look for an advisor that can support you financially as detailed in your offer letter. Laboratory rotations give you the opportunity to experience each lab without making a commitment, so be sure to use this time wisely.

Students may choose any BISI faculty member as an advisor, however, to be eligible to accept a student, an advisor or their home unit must be able to satisfy the student's financial requirements as detailed in the offer letter.

Students that choose to work with an off campus (adjunct) faculty member must have an on campus advisor. The student becomes a member of that faculty member's department. Students are also encouraged to seek advice, guidance, and help from several faculty members to gain additional knowledge, concepts, or techniques that may be useful to them in their research.

When appropriate, due to divergent research interests or other factors, either the student or the advisor is permitted to initiate a change in advisor. All parties involved must be notified in writing of the change, with a copy of the letter provided to the BISI Program office for inclusion in the student's file. It is the student's responsibility to obtain a new advisor within the same semester that the change occurred. Under exceptional circumstances, the Director of Graduate Studies may allow the student an additional semester to obtain another advisor. Failure to obtain a faculty advisor within a year of the change may result in cancellation of matriculation.

Laboratory Rotations

All students can choose to perform laboratory rotations, even those that come into BISI with an advisor identified. The MOCB & CBBG Concentration Areas require two laboratory rotations in the first semester that last ~7 weeks each. A third rotation is required during the winter break. Students set up rotations after (1) identifying and meeting with faculty performing research that interests the student and (2) consulting with the CA Director.

Students are required to complete a Rotation Agreement with each faculty member chosen for rotations. This form explicitly states the faculty member's expectations for the rotation period and provides the student with an assessment of their work. Both student and faculty member should sign off on the expectations as well as on the assessment.

Students are expected to prepare at least one oral or written report on their activities in each rotation laboratory. This could take the form of a group meeting or a written final report. The rotation laboratory PI will be asked to evaluate the student's rotation as satisfactory or unsatisfactory and this evaluation is communicated to the CA Director. Students are usually not required to take a Research Rotations course. If a research course is desired in the first year, students can add credits under the CA Director's section.

After the three required rotations, a student, with the consent and agreement of the lab director, may join that lab. Students and advisors should sign an Advisor Agreement form and submit it to the BISI Office as soon as a decision has been reached. Additional rotations can be performed, with the CA Director's permission, if the student does not join a lab. All BISI students must identify an advisor within their first year or be dismissed from the program.

Teaching

BISI students must complete two semesters as a teaching assistant (TA) during their time in the program. They are also required to enroll in BISI688Z (Teaching Science), a course that focuses on the pedagogy of undergraduate education.

Waivers of these requirements must be requested in writing by the student's advisor and approved by the Director of Graduate Studies.

Course Requirements

A doctoral candidate must complete a minimum of 12 semester hours of post-candidacy doctoral research (BISI899), and a total of 30 hours of graduate academic credit. These courses should include:

- At least 9 credits of advanced coursework (required courses count toward this total)
- At least 3 credits of graduate seminar courses
- At least 2 credits of a professional development course (e.g Bioethics, Teaching Science)

Additional course requirements by CA

BEES

- BEES608a graduate seminar
- Bioethics (either BISI688B or another approved course)
- Participation in an approved Statistics course (600-level or higher), or a more appropriate graduate-level quantitative course in consultation with First and Second Advisory Committee members.
- Regular attendance at the weekly BEES seminar series.

CBBG

- CBMG688Y-Bioinformatics and Genomics (2 credits, 7 weeks), Fall
- CBMG688P-Programming for Biology (2 credits, 7 weeks), Fall
- CBMG699D-Bioinformatics and Computation Biology Seminar Series (1 credit Fall, 1 credit Spring)
- BISI688B-Bioethics (1 credit), Fall or Spring
- MOCB699-Laboratory Rotations (2 credits), Fall
- CBMG688Z - Teaching Science (1 credit), Fall (*required for all TAs*)
- 5 credits of electives

MOCB

Required core courses in the 1st year:

- CBMG 688D: Cell Biology I: Structure and Function (2 credits, 7 weeks) - Fall
- BCHM 661: Nucleic acids I (2 credits, 7 weeks), Fall
- CBMG 688F: Gene Expression (2 credits, 7 weeks), Spring
- CBMG 688I: Genetic Analysis (2 credits, 7 weeks), Spring

Additional courses required for all MOCB students:

- BISI 688B*: Bioethics (1 credit), Fall or Spring
- BISI 688Z*: Teaching Science (1 credit), Fall *(required for all TAs)*

Additional elective coursework (8 credits) is required. These credits can be a combination of 2 credit modular courses and 3 credit semester courses. All electives must be in science courses, 600 and above.

Students are also expected to attend MOCB seminars. In some cases attendance may conflict with a teaching assistantship assignment. If this occurs the student should attend a seminar from one of the other BISI or Departmental seminar series. The general policy is that students should attend at least one seminar a week as part of their scientific development. The expectation is that this will continue through the student's time in the program.

**Currently, these courses have temporary course designations. As the courses become permanent, these designations may change.*

PSYS

Since PSYS spans biological disciplines, *only two specific courses are required*: an ethics course and the graduate seminar. In addition, students should choose three core courses to provide training in their research area, in consultation with their Advisory Committee:

- PSYS graduate seminar
- Bioethics
- Three core graduate level courses (2-4 credits each) that address contemporary issues in physiology, biophysics, biomechanics, computational biology, development, endocrinology, neuroscience, and physiology.
- Participation in an approved Statistics course (600-level or higher), or more appropriate graduate-level quantitative course in consultation with Advisory Committee members.

Additional courses may be added with the permission of the Concentration Area Director and the first year committee.

Research in Progress Seminars (RIPS)

All students in the BISI Graduate Program are required to give a Research in Progress seminar in their 2nd and 4th years (and every 2 years after that). These short (20 minute) talks (with 5 minutes for questions) typically report a research result. It is expected that the talk follow the typical scientific presentation format (background, method, data, results, and conclusions). RIP seminars are presented to an audience consisting of faculty, graduate and undergraduate students, and postdocs. Students may present in any of the following venues:

BEES: BEES seminars, Monday, 12:00 – 1:00 p.m., 1103 Bioscience Research Building

CBBG: CBCB RIP seminars: Thursday, 2:00 – 3:00 p.m., 3118 Biomolecular Science Building OR
CBMG RIP seminars: Thursday, 12:30 – 1:30 p.m., 1103 Bioscience Research Building

MOCB: CBMG RIP seminars: Thursday, 12:30 – 1:30 p.m., 1103 Bioscience Research Building

PSYS: Any formal setting that includes PSYS faculty and students

Students can present in any formal setting ***that includes faculty and students*** and provides ***them with some feedback on their presentation*** (this feedback does not have to be a grade).

The call for speakers for the CBMG and CBCB RIPS are usually distributed early in the semester. If you are a 2nd or 4th year student, you can sign up for a talk in either fall or spring and you only have to give one RIPS that academic year. Students that are advised by CBMG faculty are required to attend all RIPS unless teaching or taking a class during that time.

Registration:

All graduate students must register for courses and pay fees each semester, not including summer and winter sessions, until the degree is awarded.

A student who fails to register and who has not requested and received a waiver of registration or "Leave of Absence for Childbearing, Adoption, Illness or Dependent Care" will

be notified by the Graduate School after the first day of classes that they must register for the current semester. If the student does not register, they will be dismissed from their graduate program immediately for failure to comply with the continuous registration requirement.

Full time enrollment**:** Students must enroll for 48 units of coursework each semester. A full time on campus TA or RA counts as 24 units (half time = 12 units); an additional 24 (36) units of coursework is required to be full time. Students that work and are funded off campus will need to enroll for the full 48 units of coursework. The following table converts the conventional credit hours to units:

- Courses in the series: 000-399 = 2 units per credit hour.
- Courses in the series: 400-499 = 4 units per credit hour.
- Courses in the series: 500-599 = 5 units per credit hour.
- Courses in the series: 600-897 = 6 units per credit hour.
- Master's Research course: 799 = 12 units per credit hour.
- Pre-candidacy Doctoral Research courses: 898 =18 units per credit hour.
- Doctoral Dissertation Research: 899 carries 18 units per credit hour. All doctoral candidates must *pay candidacy tuition* for which they will be registered for six (6) credit hours of 899; this defines all currently registered doctoral candidates as full-time.

Upon reaching candidacy, students will automatically be enrolled for 6 credits of BISI 899 each semester until they graduate**. It is the student's responsibility to ensure that they are enrolled each semester.**

Student Appointments, Support & Stipends

All BISI students with on campus advisors should have 9.5-month appointments. In some cases, a 12-month appointment may be necessary. Payroll personnel in Biology, CBMG, and Entomology set up your appointments and are aware of this policy. If your advisor is in a different department, please have the payroll person contact BISI to ensure that all BISI policies are met.

All BISI students admitted to the program are guaranteed 5 years of support providing that they remain in good standing in the program. Financial support can be in the form of teaching, research, or administrative assistantships, fellowships, or scholarships. Once a student chooses an advisor, that advisor and their department are responsible for providing this support. Students that choose advisors in the Department of Biology and Department of Cell Biology & Molecular Genetics have priority for teaching assistantships in these departments, however all BISI students can request a teaching assistantship. Students that have an off campus advisor may receive support from that organization (e.g. National Institutes of Health) or through the University. Students that choose off campus advisors should meet with the Associate Director to discuss options for support.

Students that receive all of their support from either external or internal fellowships may still receive full tuition remission or may request full tuition remission from the Graduate School. Students that receive a fellowship should consult with the BISI Office to ensure that they receive tuition remission. Because fellowship recipients are not considered University employees, they are not eligible for employee insurance. Student insurance is available

through the University Health Center.

Advisory Committee

The Advisory Committee is usually created during the student's second year. The on campus advisor chairs the committee. However, if a student has both an off and on campus advisor, then permission to allow both advisors to *co-chair* the committee can be requested from the Graduate School.

Your committee must consist of *at least* five members of the Graduate Faculty, **three** of whom must be *full members.* All on campus, tenure track faculty members are full members of the Graduate Faculty. One of these full members must be identified as the Dean's Representative. The Dean's Rep must be a *tenured faculty member with an on campus tenure home different from your advisor and/or co-advisor* and is a voting member of the committee.

Additionally:

- Adjunct Faculty members are defined as off campus faculty that have adjunct appointments with a department on campus. These faculty members must be nominated to the Graduate Faculty as ***Adjunct Members.***
- On campus, non-tenure track faculty (e.g. research professors) can serve on dissertation committees, but must be appointed as an ***Adjunct Member*** of the Graduate Faculty.
- Off campus scientists that are not departmental adjuncts can serve on dissertation committees, but must be appointed as ***Special Members*** of the Graduate Faculty.

Adjunct and Special Member graduate faculty appointments must be renewed. If you would like to have an off campus scientist as a member of your advisor committee, please check with the BISI Office to see if they have a current appointment. If they do not, the procedure for procuring a graduate faculty membership is in the appendix. The process for nominating off campus scientists to the Graduate Faculty is done one time per semester; it is suggested that you obtain graduate faculty membership for your off campus committee members at the time of your qualifying exam.

Mandatory Advisory Committee Meetings

The number and frequency of advisory committee meetings depends on the concentration area.

BEES & PSYS

- 1st Committee Meeting*
  - Occurs prior to registration in semester 1
  - Student meets with advisor and a senior graduate student
  - Purpose: To review the student's academic background and research interests prior to developing an appropriate schedule of classes for the first semester.
- 2nd Committee Meeting*
  - Occurs during in late in semester 2
  - Student meets with advisor(s), three additional faculty members, and a senior graduate student (note that this group should form the beginning

of the student's advisory committee)
    - Student should print and bring a current copy of their transcripts
    - This meeting is intended to review the student's background in their proposed research area and help develop research plans in anticipation of the student's preliminary meeting.
- Preliminary meeting*
    - Occurs during 4th semester.
    - Student should print and bring a current copy of their transcripts
    - See policies below.
- Qualifying exam*
    - Occurs during 5th semester
    - Student should print and bring a current copy of their transcripts
    - See policies below
- Yearly Advisory Committee meetings (after advancing to candidacy)*

<u>CBBG & MOCB</u>

- Semester 1
    - Student meets with Concentration Area Director
    - Purpose is to review the student's academic background and research interests prior to developing an appropriate schedule of classes for the first semester
- Semester 3
    - The adviser and the student should agree on suitable committee members, and it is the student's responsibility to contact potential committee members.
    - The CA Director approves the Committee
    - Students must submit the committee names and affiliations to the BISI Program Office.
- Semester 4
    - The students must meet with their Advisory Committee to introduce themselves and their project and to get feedback on what background areas of knowledge the committee believes will be important to their success.
    - The adviser must submit a written report that addresses the committee's evaluation of the student's project and whether the student is making adequate progress consistent with their current standing in the program. Specific recommendations for improvement (if relevant) may be included.
- Preliminary meeting*
    - Occurs during 5th semester.
    - Student should print and bring a current copy of their transcripts
    - See policies below.
- Qualifying exam*
    - Occurs during 6th semester
    - Student should print and bring a current copy of their transcripts
    - See policies below
- Yearly Advisory Committee meetings (after advancing to candidacy)*

*Please file the appropriate paperwork with the BISI Office following each meeting.

PRELIMINARY MEETING

The goal of the preliminary meeting, which is not a test and is not assessed, is to give the student an opportunity to present their research proposal and meet with their committee in a relaxed setting to receive constructive feedback on the proposal and project, and to discuss clear expectations for topics and lines of questioning for the qualifying exam. The tone of this meeting is to be supportive, but students should expect to be questioned on their proposal and project. The student should leave the preliminary meeting with the scope of the qualifying exam clarified, and empowered with advice, guidance, and strategies to strengthen the dissertation proposal and prepare for the exam.

Timing

The preliminary meeting takes place no later than the end of the student's 5th semester (4th semester for BEES), and is generally 2-3 months in advance of the qualifying exam. A relatively short interval between the two meetings is strongly encouraged to maximize the value and retention of the information exchange facilitated at the preliminary meeting.

Preliminary meetings will generally be about 1.5 hours long (flexible of course).

Extensions for the preliminary meeting (beyond semester 5) are rare. Students who must delay their preliminary meeting past the end of their 5th semester must submit a written request for an extension, as do their mentors. This request is due 60 days before the end of the student's 5th semester and requires a justification for the extension, acknowledgment from the advisor that the student is on track and making good progress, and a proposed revised date for the preliminary meeting. The CA Director as well as the DGS must approve this request.

Note: Students do not need to have substantial amounts of preliminary data prior to their preliminary meeting; lack of sufficient data is not considered a valid excuse for delaying this meeting. By semester 5, students should have their thesis direction in reasonable focus. Those research questions and initiatives should enable students to proceed with this meeting on schedule even if work on all aspects of the project have not yet been designed or commenced.

Advisory Committee

The student's advisor will chair the preliminary meeting. All other thesis committee members will attend (telecommute attendance permitted). At least 2 of the attending members of the advisory committee must be full members of the BISI faculty. While it is not required that the Dean's Rep attend the preliminary meeting, it is highly suggested that the entire advisory committee be in attendance for both the preliminary meeting and the qualifying exam.

Written Proposal & Oral Presentation

Students will prepare a dissertation proposal according to their major advisor's instructions, often following either NIH or NSF guidelines. This proposal must be distributed to the student's preliminary meeting committee two weeks before the meeting.
Students should prepare 15-20 minute overview (around 15 slides) of the proposed thesis research, including questions and hypotheses, methods and experimental design, preliminary data, and broader context / significance of the project. Students should expect to be interrupted with questions during their presentation, so the actual duration of the presentation may be substantially longer than 20 minutes.

Committee Recommendations

Following the oral presentation and questions from the committee, the committee will provide the student with feedback (strengths and weaknesses; constructive suggestions for improvements) on the research project, the written proposal, the oral presentation, and the student's overall knowledge of the subject matter. There is no grade for the preliminary meeting. The meeting will conclude with the committee providing the student with a list of up to 3 areas of specialization (level of breadth at the discretion of the committee) that will be focal topics for questioning at the Qualifying Exam. Topics directly pertaining to the student's research proposal will also be appropriate lines of questioning during the Qualifying Exam, as will general knowledge areas drawn from the student's graduate course work.

QUALIFYING EXAM

Timing

The qualifying exam takes place by the end of the student's 6th semester (5th semester for BEES), and generally within 2-3 months of the preliminary meeting.
Extensions beyond semester 6 are rare, and require an approved written request for extension from the student and faculty advisor, as described above for the preliminary meeting.

Committee

The exam committee will be chaired by the student's advisor, and should include all members of the student's doctoral committee (telecommute attendance is permitted by no more than 1 committee member). At least 2 of the committee members must be full members of the BISI faculty.

Objectives & Scope

To advance to candidacy, students must pass the qualifying exam.

The qualifying exam is a defense of the student's doctoral research proposal, including its context and significance, as well as an assessment of the student's understanding of broader biological concepts.

The developing thesis project provides the framework for the qualifying exam, but questioning will also focus on determining whether the student has sufficient background knowledge, along with the abilities to think, synthesize, integrate, and communicate information, required for successfully completing the Ph.D. degree.

The Exam

Revised Written Proposal
(The format as described for preliminary meeting; document revised following first draft edits / suggestions discussed at the preliminary meeting). The revised proposal is due to the committee two weeks prior to the qualifying exam.

Oral Presentation (may be waived by the Advisory Committee)

Students normally present at least a brief review of their research proposal at the qualifying exam to help initiate and guide discussion. Depending upon the student's performance at the preliminary meeting and following the advisor's and committee's recommendation, the student may be asked to provide a full presentation of their proposal. A full research presentation is particularly important if:

- There were significant deficiencies in the student's presentation at the preliminary

meeting, or
- Enough time has passed since the preliminary meeting that the committee will need to be refreshed on the student's plans, or
- The substance of the proposal has changed.

Questions from Committee

The student is expected to answer questions that cover the dissertation proposal, its broader context and significance, and general knowledge within the areas of specialization identified at the preliminary meeting. The role of the chair is to facilitate discussion and ensure that all members of the committee have an opportunity to participate fully. The chair is expected to maintain an impartial tone, but may participate in questioning as appropriate.

Evaluation

The committee will conclude that the student has passed or failed the exam on the basis of the student's performance during the qualifying examination and on the basis of the written research proposal. The exam should cover both defense of the research proposal and a test of general knowledge. The following outcomes are possible:

1. Pass
2. Pass with recommendations (not requirements)
3. Does not pass, with requirements, but no need to retake the formal exam
4. Does not pass, with the option to retake the formal exam
5. Does not pass, without option to retake the formal exam (results in dismissal from the program)

The student passes if all, or all but one, of the committee members cast positive votes. A vote to pass a student for admission to candidacy reflects an assessment that the student is now ready to move on to uninterrupted dissertation research. If the committee feels that the student is required to do something to achieve readiness, then this must be accompanied by a "no" vote (option 3). Any number of recommendations can accompany a "yes" vote, but these must not be mandatory. In the event that a student does not pass, the committee can detail whatever remedies it deems appropriate. Whether or not it is necessary to meet a second time is at the discretion of the committee.

The second (retake) exam will be scheduled when the major advisor considers appropriate, but no later than 9 months following the first exam. Failure to pass the second qualifying exam results in dismissal from the program.

If the committee chooses option 5 above, the student will be dismissed from the program.

In no case may a student repeat the exam a third time.

Outcome

A written report of the qualifying exam results must be given to the BISI Office for inclusion in the student's file.

The research proposal written by a student who successfully completes the qualifying examination shall automatically fulfill the scholarly paper requirement for the non-thesis M.S. degree. The student can apply for that degree if the 30-credit coursework requirements have also been satisfied.

ADVANCEMENT TO CANDIDACY

After passing the qualifying exam, the student must complete the Advance to Candidacy form; this completed form must be submitted to the BISI Office within one week of passing the Qualifying Exam. The BISI Office will submit that form to the Graduate School. Please note that, for forms submitted prior to the 25th of the month, advancement to candidacy becomes effective on the first day of the following month. A copy of this form must be included in the student's file.

Students receive a pay raise (from Step II to Step III) upon advancement to candidacy. The raise usually goes into effect on the first day of the month following advancement to candidacy. An official email from the University serves as the official notice that the student has advanced. Your payroll person needs a copy of this notification to process the pay raise.

After students advance to candidacy, they will be automatically enrolled for 6 credits of BISI899 for each semester until graduation. Tuition for these credits is no longer calculated on a per credit basis, but rather is a flat fee.
See http://bursar.umd.edu/PHD_Candidacy_2016-2017.php for current candidacy tuition.

Students must be officially admitted to candidacy at least six months prior to the conferring of their Ph.D. degree.

DISSERTATION SEMINAR

All Ph.D. candidates must give a formal seminar that presents the final results of their dissertation research. The seminar is open to faculty, students, and other interested parties. It is usually presented immediately preceding the oral dissertation defense. Students are encouraged to schedule their dissertation seminar during one of the program seminar times (M: 12-1; W: 12-1; Th: 12:30-1:30; F: 12-1). The BISI program staff will ensure that the dissertation seminar is announced in accordance with the policies of the Graduate School.

The step-by-step procedure for students that are planning to graduate is included in the Appendix to this document.

Scheduling the Defense

Students usually have a meeting with their advisory committee prior to planning their defense. At this meeting the advisor, student, and committee decide on a timeframe for the defense. The student should work with the advisory committee and advisor to find an acceptable day and time for the defense. The student is responsible for distributing a complete copy of the dissertation to each member of the committee at least ten working days before the examination.

The doctoral dissertation must be completed and defended within four years after passing the qualifying examination, but no later than nine years after admission to the program. Students requiring additional time may appeal to the Dean of the Graduate School.

Extensions of time for doctoral students must be requested from the Graduate School by the doctoral program. The first request for an extension of the deadline for completion of the doctoral dissertation requires a letter of support from the Graduate Director. The letter must include a timetable listing specific goals to be accomplished at various points during the extension period. Normally, the extension will be for a maximum of one year.

The request for a second extension requires a letter of support from the Graduate Director that includes a statement that the graduate program has approved the request. Departmental approval may be either a vote of the department as a whole or of a committee designated to deal with such matters, such as the Graduate Committee. The letter must include a timetable that lists specific goals to be accomplished at various points during the extension period. Typically this extension will be for a maximum of one year.

Composition of Examining Committee

The Dissertation Examining Committee requires nomination by the student's advisor and the Graduate Director of the student's graduate program, and approval by the Dean of the Graduate School. The nomination of a Dissertation Examining Committee should be provided to the Graduate School at least six weeks before the date of the expected dissertation examination. The dissertation examination cannot be held until the Graduate School approves the composition of the Dissertation Examining Committee. Furthermore, if the Graduate Faculty status of any member of an approved Dissertation Examining Committee changes, the approval of the Dissertation Examining Committee may be void, and a new Dissertation Examining Committee nomination form may be required to be approved by the Graduate School.

Suggested Procedures for the Final Oral Examination

The student's major advisor is responsible for chairing the examination. The chairperson has some latitude in the manner of conducting the examination, but the following major steps are usually to be followed. Of paramount importance is consideration for the candidate. He or she may be under considerable strain, and it is particularly inadvisable to let the meeting run on for an unreasonably long period of time.

- Any member of the Graduate Faculty is permitted to attend a doctoral examination, but only members of the appointed committee may question the student and vote at the conclusion of the examination.
- The student, the committee, and any attending members of the Graduate Faculty convene in closed session.
- The Dean's Representative is identified, and his/her special functions explained.
- The student may briefly present high points of the dissertation, emphasizing the important aspects and giving an explanation of the reasoning that led to the conclusions reached.
- The chairperson invites questions in turn from members of the Committee, going through the whole group. The questioning may continue as long as the Committee feels necessary to properly examine the student.

Conclusion of the Defense

After questioning has been completed, the student is asked to leave the room, and the Committee discusses whether the defense has been satisfactory. The committee has the following alternatives:

- To accept the dissertation without any recommended changes and sign the Report of Examining Committee.
- To accept the dissertation with recommendations for changes and, except for the chair, sign the Report of the Examining Committee. The chair will check the dissertation and, upon his or her approval, sign the Report of Examining Committee.
- To recommend revisions of the dissertation and not sign the Report of Examining Committee until the student has made the changes and submitted the revised dissertation for the Dissertation Examining Committee's approval. The Dissertation Examining Committee members sign the Report of the Examining Committee if they approve the revised dissertation.
- To recommend revisions and convene a second meeting of the Dissertation Examining Committee to review the dissertation and complete the student's defense.
- To rule the dissertation (including its defense) unsatisfactory. In that circumstance, the student fails.

Following the defense, the chair, in the presence of the Dean's Representative, must inform the student of the outcome of the defense. The chair and the Dean's Representative both sign a statement indicating which of the above alternatives has been adopted. A copy of the statement is to be included in the student's file at the graduate program office, and a copy is given to the student.

Passage or Failure

The student passes if one member refuses to sign the Report, but the other members of the Dissertation Examining Committee agree to sign, before or after the approval of recommended changes. Two or more negative votes constitute a failure of the candidate to meet the dissertation requirement. In cases of failure, the Dissertation Examining Committee must specify in detail and in writing the nature of the deficiencies in the dissertation and/or the oral performance that led to failure. This statement is to be submitted to the program's director of graduate studies, the Dean of the Graduate School, and the student. A second defense is permitted if the student will be in good standing at the time of the proposed second defense. A second defense requires the approval of the program's director of graduate studies and the Dean of the Graduate School. If the student fails this second defense, or if a second defense is not permitted, the student's admission to the graduate program is terminated.

If the defense is satisfactory, then the dissertation in its final form is to be submitted electronically to the Graduate School by the announced deadline.

REVIEW OF GRADUATE STUDENT PROGRESS

Graduate Student Activity Reports (GSAR)

Each fall, all BISI students must submit an electronic student activity report; this report includes a short synapsis of the research carried out in the previous academic year as well as a listing of student awards, presentations, and publications. *It is essential that this report is accurate and reflects the student's professional activities over the previous 12 months*. The student's advisor will then review the GSAR and write an evaluative statement about the student's progress. The student and advisor should then meet to review the report and both student and faculty member sign the report (this can occur concurrently with the student's annual advisory committee meeting). A copy of the signed report is then filed with the BISI Office to be placed in the student's file. *Failure to submit all requested forms by required deadlines will result in "administrative probation."*

Review of Graduate Student Progress

At the end of each semester, the cumulative grade point average (GPA) is examined to determine whether or not the student has maintained a GPA of 3.0 in courses receiving graduate credit.

Once each academic year, the CA Directors and the graduate office conducts an analysis of the student's progress toward the completion of the degree by reviewing all files to insure that adequate progress is being made toward the completion of his or her degree program and, in conjunction with the Director, Associate Director, and student advisor, may place a student on academic probation for failure to make satisfactory progress toward the degree. In this case, both the advisor and the student are notified of the student's probationary status, the conditions for retention in the graduate program and the date by which they must be met.

ACADEMIC PROBATION

Grades/GPA

Students whose cumulative grade point average falls below 3.0* are placed on academic probation by the Graduate School. Both the student and the BISI Graduate Director will be notified; BISI will then inform the student's advisor and CA Director. Permission of the student's faculty mentor and the BISI CA Director are required for a student on probation to register for courses. Probation is lifted when the student achieves a cumulative GPA of 3.0.

Consistent with Graduate School policy, students who have completed either fewer than 12 credits, or two semesters or less, and have a cumulative GPA less than 3.0 will have until the end of their first year to raise their GPA to 3.0 or higher before the Graduate School places the student on academic probation. Once on academic probation, the student will have one semester to raise his or her GPA to 3.0. Students who have completed 16 or more hours of course work and whose cumulative GPA falls below 3.0 will also have one semester in which to raise his or her GPA to 3.0. Failure to meet these timelines will result in dismissal from the program.

The BISI graduate program requires that the student, his/her advisor (or a faculty member in the student's general field of interest if an advisor has not yet been selected), and the CA Director create a specific plan, including timeline, to provide the student with the opportunity to raise his/her GPA above 3.0. Copies of this plan, signed by student, mentor, and CA Director, must be given to the BISI Office Administrative Assistant to be placed in the student's file and to inform the BISI Director and Associate Director. BISI will send a copy to of the plan to Assistant Dean of the Graduate School.

Graduate students who receive a grade below a B- in a course required either by the program or advisory committee must repeat that course and earn a B- or higher. Students who repeat required courses and fail to achieve that B- or higher mark in that course will be dismissed from the program.

If a grade below B- is earned in a course that is not required, the student is not required to repeat the course, however cumulative GPA requirements hold.

While B- (2.7) grades are accepted for required courses, students must maintain a GPA $\geq$ 3.0 or risk being placed on academic probation, as described above.

Independent study (699) courses count toward cumulative GPA, however students may enroll in a 699 course only after the CA Director has discussed ramifications of such a course with the mentor. The courses must have clear, written (brief sentences or bullets are fine) objectives and expectations discussed in advance with the student and approved by the CA Director.

Research

BISI students must make satisfactory progress in meeting programmatic requirements and benchmarks, must demonstrate the ability to succeed in his/her research, and must attain performance minima as specified by the program and the advisor.

If an advisor feels that a student is making insufficient progress, the advisor must notify the student of the concern, in writing (email fine) or via comments in the annual progress report (to be shared with the student). Following discussions with the CA Director and other colleagues if desired, the faculty mentor must develop a reasonable plan for the student to attempt to remediate. This plan should include benchmarks for the student to meet and a timeline for completion (within 1 semester; a summer counts as 1 semester). Ramifications for not completing the plan within the given time limit should be stated clearly. The student, advisor, and CA Director must sign the plan and a copy will be placed in the student's record.

Students may remain on Probation for a particular problem for a maximum of 1 academic semester (summers do not count as a semester in this context) before they are dismissed from the program.[#]

[#] *Students that are placed on probation during fall (spring, summer) semester have until the end of spring (summer, fall) semester to remediate.*

University policies

There are additional policies on campus that affect the status of graduate students:

- Graduate Assistantship Policies (teaching and research) can be found at www.gradschool.umd.edu/catalog/assistantship_policies.htm
- Code of Academic Integrity: www.president.umd.edu/policies/doc/III-100A.pdf
- Code of Student Conduct: www.president.umd.edu/policies/docs/v100b.pdf
- University Policy & Procedures on Sexual Harassment: www.president.umd.edu/policies/docs/VI-120A.pdf
- Human Relations Code: http://www.ohrp.umd.edu/compliance/hrc/intro.html

ADMINISTRATIVE PROBATION

All graduate students in the BISI program must submit annual progress reports and must respond to the Fall and Spring Support document. Timely response to important deadlines is part of professional training, responsibility, and success. Failure to submit the annual report or the support documents (each fall and spring) following two reminders from the BISI administrative staff results in *Administrative Probation.*

Students placed on Administrative Probation are considered not in good standing with the program and therefore:

- Have low priority in opportunity and course choice in TA assignments
- BISI will not participate in nominating the student for campus / college / program / external awards (including travel awards), and
- Will not receive supporting letters from the BISI Graduate Program

Students who remain on Administrative Probation for 2 consecutive semesters (in this case a summer counts as 1 semester) will be considered to be making unsatisfactory progress and thus fall under the Probation policy pertaining to unsatisfactory progress (as above)

MEDIATION, CONFLICT RESOLUTIONS, AND APPEALS

Students experiencing conflict with their advisor, committee members, other faculty, or with lab members should discuss their concerns with their Concentration Area Director and/or the BISI Associate Director or Director as soon as possible. Conflicts with teaching supervisors or faculty should be brought to the attention of the Associate Director immediately, who will work with the Assistant Dean for Undergraduate Studies to resolve the conflict. If a student requests mediation, it will be provided via the Graduate School Ombudsperson. The student may meet with the Graduate School Ombudsperson at any time for advice and guidance.

Consultation with the campus' Ombudsperson for Graduate Students

Students are invited to consult with the University's Ombudsperson for Graduate Students at any time regarding any issue, options, to help resolve conflicts, and to work toward resolution of any area of concern. For further information, please visit *http://gradschool.umd.edu/about-us/ombuds-office*

Appeals

If a student wishes to appeal any BISI Probation decision or consequence, the appeal must be submitted directly to the Graduate School.

Changing Research Labs Due to Personality Conflicts or Insufficient Progress Issues

Student initiated: In some cases students may opt to leave a research group if mediation and conflict resolution do not solve issues. In order to retain departmental/programmatic support, the student should secure a position in another research group before resigning a position in their current lab. Written notification of the change from both the student and the student's new mentor is required and should be sent to the CA Director and copied to the BISI Director and Associate Director.

Advisor initiated: In some cases, students may be asked to leave their research group. If an advisor requests that a student leave his/her research group, the student must take initiative to find another advisor within 1 semester (summer counts as 1 semester). Failure to join another lab group will result in withdrawal of financial support and dismissal from the graduate program.

REQUIREMENTS FOR MASTER OF SCIENCE IN BIOLOGICAL SCIENCES
(NON-THESIS OPTION)

The non-thesis Master of Science degree option is available only for doctoral students who wish to leave the graduate program without completing the Ph.D. External applications for the non-thesis master's option are not accepted. In addition, the non-thesis master's degree program provides the opportunity for Ph.D. candidates to earn an M.S. degree while completing the course work appropriate for their Ph.D. program.

Advisement

Students that decide to leave the Ph.D. program should meet with the Associate Director of Graduate Studies to discuss all options available. Following this meeting, the student should then meet with the program coordinator who will review the student's academic background and specify any additional preparatory work deemed necessary. The program coordinator will annotate the student's electronic record to reflect the change in status.

Course and Credit Requirements

- Any deficiencies must be addressed by taking the recommended courses.
- Completion of no fewer than 30 hours of course work with an overall grade point average of "B" (3.0)
    - Of these 30 hours, at least l8 hours must be at the 600-level or above (BISI799, Master's Thesis Research, and BISI898/899, Dissertation Research, do not count in this program). The other l2 hours can be at the 400-level or above.
    - Of these 30 hours, no fewer than l6 hours must be in biological sciences.
    - Of these l6 hours, three courses should be in a single area of specialization within biology.
- All requirements for the Master's degree should be completed within a three-year period. In no case will an exception be made to extend the time beyond the five-year Graduate School limit.

Scholarly Paper

One scholarly paper must be written in an area of biology approved by the student's advisor. The paper is to be developed apart from course work. The source material for the paper can be current scientific literature, laboratory work, or field observations, and must contain a synthesis of the subject that goes beyond the current literature. During the semester before the paper is to be written, the student, advisor, and an additional faculty member, who will serve as a second reader of the paper, will meet to decide the area, topic, and scope of the paper. After this meeting, the student will write the paper obtaining advice from the advisor as necessary. The final paper must be submitted for approval by the advisor and second reader at least 2 weeks prior to the final date specified by the Graduate School for submission of forms certifying degree completion. The paper must receive the written approval of both faculty members. After such approval is obtained, an electronic copy of the paper must be placed in the student's file in the BISI Program Office.

The thesis from a failed M.S. thesis defense may not be submitted to fulfill the scholarly paper requirement for the non-thesis M.S. unless appropriate revision has occurred. Such papers require signed approval by two BISI faculty members.

The proposal prepared for a successful preliminary examination for Ph.D. candidacy shall automatically satisfy the scholarly paper requirement for the non-thesis M.S.

Completing the Program

Prospective candidates for the non-thesis Master's degree must submit an application for their diploma and other required paperwork to the Graduate School by deadlines announced each semester.

REQUIREMENTS FOR MASTER OF SCIENCE IN BIOLOGICAL SCIENCES (THESIS OPTION)

The thesis Master of Science degree option is available only for doctoral students who wish to leave the graduate program without completing the Ph.D. External applications for the thesis master's option are not accepted. The thesis Master of Science degree program provides qualified students with the opportunity to enroll in advanced course work and to undertake a research project.

Advisement

Students that decide to leave the Ph.D. program should meet with the Associate Director of Graduate Studies to discuss degree and professional development options. The student should then meet with the program coordinator, who will review the student's academic background and specify any additional preparatory work deemed necessary. The program coordinator will annotate the student's electronic record to reflect the change in status.

Each student's thesis project is developed individually with a faculty advisor. If it is appropriate, at any point during the degree program, the student or the advisor is free to initiate a change in advisor. A student whose thesis research is being done under the direction of an adjunct (i.e. off campus) professor must have an on campus advisor.

Course and Credit Requirements

Any deficiencies must be addressed by taking and passing the recommended courses.

Completion of 30 credits:

- 6 credits of BISI 799 Master's Researchj

Of the remaining 24 credit hours:

- A maximum of 12 credits at the 400-599 level;
- 12 credits must be in biology courses (these can include courses in CBMG, BIOL, ENTM, CBMG, MOCB, BEES or other biology related course designations);
- All requirements for the Master's degree are to be completed within a three-year period. In no case will exceptions be made to extend the time beyond the 5-year Graduate School limit.

Thesis Defense

Submission of Thesis

It is the student's responsibility to furnish copies of the thesis to the committee members at least seven working days before the examination. The oral examination may be conducted whenever the thesis is completed to the satisfaction of the advisor, providing the student has completed all other requirements for the degree and has at least a "B" average on all graduate work.

Composition of the Examining Committee

The oral defense of the Master's thesis is conducted before a committee composed of a minimum of three members. The student's advisor chairs the committee. The other members of the committee are persons who are familiar with the student's program of study. Students must submit a signed Nomination of Thesis Committee form, signed by the committee chair, according to the deadlines set by the Graduate School. Once the defense has been scheduled, a copy of the abstract of the thesis must be submitted to the BISI program office. Office personnel will announce the defense approximately 10 days prior the scheduled date.

Evaluation of Thesis

The committee vote to pass a student on their oral examination must be unanimous. One dissent constitutes a failure. At the discretion of the committee, the student who fails may be permitted a second examination after acting on suggestions for improvement of the thesis (collection of more data, use of a different statistical analysis, rewriting of the discussion, etc.) and at such time as the major advisor may consider appropriate.

Outcome

The report of the examining committee is submitted to the Graduate School and a copy placed in the student's program file.

Completing the Program

It is the responsibility of both student and advisor to meet the Graduate School deadlines for certification of thesis completion and for the report on the outcome of the oral examination. The thesis in its final form (incorporating changes required by the committee) must be submitted electronically to the Graduate School by the announced deadline.

APPENDIX

Registration

All graduate students must be registered for classes every fall and spring semester in order to remain in a graduate program. The only exception to this is for medical/maternity/paternity leave.

Here are a few hints to help you with registration and ensuring that you're taking the right number of credits each semester:

- Students register for classes at www.testudo.umd.edu (Testudo is the UMD mascot!) under the "Registration" link.
    - Log in with either your university directory ID (the part of your email address before @umd.edu) OR your university ID number, either way, the password that you use will be the one for your university email.
    - Course offerings can be found here: https://ntst.umd.edu/soc/ (be sure that you are looking at the correct semester).
    - If you need special permission to take a course, contact the instructor and they will let you know how to gain access to a course. The BISI Office can also help you get access to a course.

Course electives

MOCB Electives:
Current elective offerings include:

- Virology
- Microbial Pathogenesis
- Microbial Genetics
- Immunology and Host Defense
- Bioinformatics
- Cell biology II (Signal Transduction)
- Plant Biology: Plant Development and Physiology

Each of these courses is listed as CBMG688 (letter). The different letters indicate the different courses.

PSYS Electives
Additional courses may be added with the permission of the Concentration Area Director and the first year committee (all are 3 credits except where noted:

- BIOE603: Electrophysiology of the Cell
- BIOE602: Cellular and Tissue Biomechanics
- BIOL622: Membrane Transport Phenomena
- BIOL651: Physical Chemistry for Biologists
- BIOL708L: Quantitative Analysis of Biological Data (4 cr)
- BIOL708o: Cell Biology from a Biophysical Perspective
- CBMG688W: principles of Microscopy (2 cr)
- NACS643: Computational Neuroscience (4 cr)

CBBG Electives
Current elective offerings suggested for CBBG elective credit include (but are not limited to):

- BIOM688E: Topics in Biometrics: Computational and Statistical Genomics (Sp. Song)
- CMSC422: Introduction to Machine Learning (Sp.; Subrahmanian)
- CMSC432: Bioinformatic Algorithms, Databases, and Tools (F; Corrada-Bravo)
- CMSC702: Computational Systems Biology (Sp.; Corrada-Bravo)
- CMSC858D: Advanced Topics in Theory of Computing; Computational Proteomics (Sp.; Khan)
- STAT420: Introduction to Statistics (Sp.; Xu, Ren)
- CBMG688F: Gene Expression (Sp., Dinman)
- CBMG688I: Genetic Analysis (Sp.; Mount)
- BIOL608K Characterization and Evolution of Developmental Networks (Sp.; Kocher)
- BIOL671: Molecular Evolution (F.; Cummings)
- BIOL709E: Developmental Genetics (Sp.; Haag)
- ENTM798V: Introduction to R for

• NACS644: Cellular and Molecular Neuroscience (4 cr) • Developmental Biology • Microscopy	Computation and Analysis in Ecology and Evolutionary Biology (F.; Gruner) • BSCI410: Molecular Genetics (F & Sp; Mount, Pick)
BEES Electives ANSC 446 Physiology of Mammalian Reproduction ANSC 447 Physiology of Mammalian Reproduction Lab ANSC 455 Applied Animal Behavior ANSC 608 Seminar in Animal Sciences ANSC 661 Physiology of Reproduction ANTH 420 Origins of Human Evolution ANTH 428 Special Topics in Bioanthropology ANTH 428 Fieldwork in Bioanthropology BIOL 625 Mathematical Biology BIOL 627 Behavioral Endocrinology BIOL 677 Ecology of Marine Communities BIOL 708 Advanced Topics in BEES BSCI 410 Molecular Genetices BSCI 460 Plant Ecology BSCI 461 Plant Ecology Lab BSCI 462 Advanced Population Ecology BSCI 463 Laboratory and Field Ecology BSCI 464 Microbial Ecology BSCI 466 Experimental Aquatic Ecology BSCI 467 Freshwater Biology BSCI 471 Molecular Evolution BSCI 472 Evolutionary Biology of Plants BSCI 473 Marine Ecology BSCI 480 Insect Form and Function BSCI 481 Insect Diversity and Classification BSCI 484 Biology of Marine and Estuarine Invertebrates BSCI 485 Protozoology BSCI 486 Systematic Microbiology BSCI 487 Managing Pests without Pesticides BSCI 491 Advanced Plant Taxonomy BSCI 494 Animal-Plant Interactions	BSCI 495 Animal-Plant Interactions Lab BSCI 4XX Bioinformatics and Genomics in Evolution BSCI 4XX Photosynthetic Life BIOM 603 Biostatistics III: Linear Models/Regression BIOM 688B Multivariate Statistics CMSC 421 Introduction to Artificial Intelligence CMSC 723 Natural Language Processing CMSC 726 Machine Learning CMSC 727 Neural Modeling CMSC 762 Numerical Solution of Nonlinear Equations ENTM 798 Seminar in Entomology GEOL 432 Biostratigraphy GEOL 434 Micropaleontology GEOL 472 Tectronics GEOL 632 Biostratigraphy and Paleoecology GEOL 634 Micropaleontology MEES 611 Systems Ecology of Estauries MEES 621 Ecology of Estaurine and Marine Environments MEES 650 Wetland Ecology MEES 721 Plankton Dynamics MEES 698R Community and Ecosystem Ecology MOCB 630 Advanced Eukaryotic Genetics MOCB 639 Advanced Cell Biology MOCB 640 Protein Structure and Function PHIL 456 Philosophy of Biology PHIL 458 Topics in Philosophy of Science PSYC 401 Biological Basis of Behavior Lab PSYC 403 Animal Behavior PSYC 759 Seminar in Auditory Mechanisms PSYC 764 Comparative Neuroanatomy PSYC 888 Research Methods in Psychology

Program Directory

Name	Position or Department	Contact information	Can answer questions about…
Dr. Charles Delwiche	Director, BISI Grad Professor, CBMG Department	delwiche@umd.edu	Issues with the BISI office staff/assoc. director, faculty mentors, or course instructors;
Dr. Michelle Brooks	Assoc. Director, BISI Sr. Fac. Specialist, CBMG Department	mmbrooks@umd.edu 301.405.3273	Program and university policy; Academic and administrative probation; Teaching/TA assignments; general graduate school angst
Ms. Gwen Warman	Program Coordinator, BISI	gwarman@umd.edu 301.405.6905	Registration, forms, student accounts, courses, graduation, prelim meeting, qualifying exam, required paperwork
Ms. Nancy Goslin	Travel & Finance Coordinator	ngoslin@umd.edu	All travel related paperwork including travel grants. All recruitment expenses.
Dr. Nate Swenson	BEES CA Director	swenson@umd.edu	CA Directors help with rotations, course selection, research questions, travel funds
Dr. Sridhar Hannenhalli	CBBG CA Director	Sridhar@umiacs.umd.edu	
Dr. Zhongchi Liu	MOCB CA Director	zliu@umd.edu	
Dr. Ricardo Araneda	PSYS CA Director	araneda@umd.edu	
Magna Gray	CMNS Payroll	msgray@umd.edu	Payroll for students that TA 105, 106, 207, 222, 103 or 189i
KeCia Harper	BIOL Payroll	kharper1@umd.edu	Payroll & Benefits for Biology Department or Biology TAs (see your contract letter)
Molly Burke	CBMG Payroll	mburke1@umd.edu	Payroll & Benefits for CBMG Department or CBMG TAs (see your contract letter)
Judy Leung	CMNS	jleung@umd.edu	Dean's or University Fellowship disbursement

Additional Contacts

Department of Biology

Dr. Bill Fagan	Department Chairperson	bfagan@umd.edu
Bonnie Miranda	Executive Admin. Assistant	mirandab@umd.edu
Amanda Grimes	Exec. Dir. of Admin & Operations	agrimes@umd.edu
KeCia Harper	Payroll Coordinator -Payroll and benefits for Biology Department RAs and TAs.	kharper1@umd.edu
Janie Brown	Grants coordinator for Biology	
James Parker	Handles key distribution for students with Biology Dept advisors	
Jennie Gouker	Undergraduate Office - Handles summer TA assignments for bsci201 and bsci202	jgouker@umd.edu
Wan Chan	IT Manager-Handles IT issues for BIOL department faculty and their graduate students	wanchan@umd.edu
Timothy Maugel	Dir., Lab for Biol Ultrastructure Manages the operation of the CCLS central facility for biological electron microscopy	tmaugel@umd.edu

Department of Cell Biology & Molecular Genetics

Dr. Jon Dinman	Department Chairperson	dinman@umd.edu
Errica Philpott	Coordinator – Chair's Office	errica@umd.edu
Pamela Moffett	Director of Administrative Services	painswor@umd.edu
Molly Burke	Payroll Coordinator -Payroll and benefits for CBMG Department RAs and TAs.	mburke1@umd.edu
Dr. Vera Stupina	Pre-award Coordinator & Research Associate	vstupina@umd.edu
Dorothea O'Toole	Coordinator: Facilities & Labs	dotoole@umd.edu
Maggie Jenkins	Undergraduate Office	maggie@umd.edu
Simone Lord-Attivor	IT Manager-Handles IT issues for CBMG department faculty and their graduate students	support@cbmgit.zendesk.com
Amy Beaven	Director of Shared Instrumentation: Imaging and Genomic Core	abeaven@umd.edu

FAQs

Who do I contact for:

Registration issues?

- If you need to gain permission for a course, speak with the course instructor
- If you need access to CBMG688Y or CBMG688P, Dr. Brooks can help register you
- If you don't know which course to take, speak with your advisor or CA Director

Account issues?

- For problems with your student account, bring a print out to the BISI Office
- For tuition remission problems (i.e. tuition remission has not shown up) contact the BISI office to find out if tuition remission has been applied yet. If it has, the BISI Office can help make sure it shows up.

Issues with Flagship, Dean's, or University Fellowships:

- If you have not received your fellowship OR you see that your fellowship has been revoked. You must be enrolled FULL time (48 units) to receive a fellowship. Check to make sure that you have the right number of units first.
- If you are enrolled full time and are supposed to be receiving a University or Dean's Fellowship and it does not show up on your account, please contact Ms. Judy Leung (jleung@umd.edu) in the CMNS Finance Office (please copy Dr. Brooks on your email)
- If you are enrolled full time and are supposed to receive a Flagship Fellowship and it is not on your account, please contact Ms. Barbara Ferguson (baf@umd.edu) in the Graduate School and copy Dr. Brooks on your email message.
- If you are an international student and you have not received your Dean's or University Fellowship, contact your payroll person.

A TA Assignment

- Dr. Brooks makes all of the TA assignments.
- The process for applying for a teaching assistantship is in the "Procedures" part of your handbook.
- If you've accepted a teaching assistantship and subsequently received funding from your advisor, contact Dr. Brooks immediately to see if a replacement is available. You can only back out of your teaching contract if, and only if, a replacement is available.

Graduation Issues

- First, look over the checklist provided in the handbook (found here)
- The BISI Office can help with any issue that you have with preparing for graduation.
- The Graduate School mandates all of the policies that surround graduation, so you can look at the Graduate Student Handbook to get an overview of the procedure (see policies here: http://apps.gradschool.umd.edu/catalog/doctoral_degree_policies.htm).

BISI Procedures

Registering for Classes

1. Pay attention to the registration deadlines. If you fail to register on time, it could cost you more money (there is a penalty for registering after the start of classes) or, if you don't register at all, you could be removed from the graduate program.
2. If you're in your first year, you should confer with your advisor or CA Director to decide which courses to take. Remember that you have to fulfill the program and CA requirements.
3. Enroll at www.testudo.umd.edu. You can log in with either your Directory ID (the part before @umd.edu in your email address) or your University ID (9 digit number on your ID), but in either case, the password is your email password.
4. You will need to be enrolled as a full time graduate student (48 units)
    a. If you are a full time TA or RA, you automatically receive 24 units (half time TAs and RAs get 12 units).
    b. Credits to units conversion for courses:
        i. Courses numbered 400-499: 4units/credit
        ii. Courses numbered 500-599: 5 units/credit
        iii. Courses numbered 600-897: 6 units/credit
        iv. Research courses numbered 798/799: 12 units/credit
        v. Research courses numbered 898/899: 18 credits/unit
5. If you are not taking course work, have not advanced to candidacy, and want to enroll for research credits only:
    a. Full time TAs and RAs should take ONLY 2 credits of bisi898. (2 credits of 898 = 36 units, plus the 24 units from teaching makes you full time)
    b. Half time TAs and RAs can also take only 2 credits of bisi898 (36 units from 898 PLUS 12 units of teaching makes you full time).
    c. If you're on a fellowship (e.g. Wiley, NSF, NIH, Graduate Deans, etc.) then you must take 3 credits of 898 to be full time.
    d. Similarly, if you're being paid off campus (e.g. at the NIH, NCI) you also must take 3 credits of bisi898 to be full time.
6. If you are post candidacy, *you should NOT be taking any coursework* ***except*** bisi899. The Registrar's Office will automatically enroll you for 6 credits of bisi 899. However, because this is done by hand, sometimes students get missed, so make sure that you're enrolled before classes start by logging into Testudo OR by checking your student account to see if tuition charges are there.
    a. Your account is charges a flat fee for post candidacy credits. You still need to pay fees out of pocket, but your advisor (RAs) or the university (TAs) are charged a single rate rather than a per credit cost.
7. Do not take more than 8 credits. The cost for fees increases dramatically once you exceed 8 credits.
8. If you have a fellowship that is paid through your student account, your fees will be deducted from it before you can receive the funds (this is true of any money that is disbursed via your student account, any account balance will be paid before the funds are disbursed).
9. You will be charged a 2% processing fee if you pay fees by credit or debit card.

Graduation Checklist

You're ready to take the steps toward graduation. Use this checklist to assist you in navigating the rough administrative waters of graduation.

☐ Notify the BISI office that you're planning to graduate in the upcoming semester!
Important Dissertation & Defense Deadlines are posted at the Graduate School website.

☐ Apply for graduation through Testudo. Applications roll over in the event that you do not complete the requirements for graduation in your chosen semester.

☐ Complete a "Nomination of Thesis or Dissertation Committee" form. Found on the Graduate School Forms page

- Your committee must consist of 5 (or 6, if you have a co-advisor) faculty members.
  - 3 must be UMD tenure track faculty
  - Dean's rep must be a full professor whose tenure home is different from your on campus advisor's tenure home (e.g. your advisor is in CBMG, the Dean's rep cannot be a faculty member in CBMG)
  - Off campus members must be members of the Graduate Faculty (BISI office personnel can help you determine this). If your off campus committee members are NOT members of the Graduate Faculty, they must be nominated, approved by the entire BISI faculty, and then approved by the Graduate School. This takes between 6-8 weeks, so plan accordingly.
- Be sure to submit copies of any research assurances (e.g. IRB, ACUC) with this form to ensure that your committee is approved.
- Submit by the deadline on the Grad School site OR 6 weeks before you defend- whichever date is first.

☐ Determine a defense date.
This is a complex process of balancing your needs, the schedules of your committee members, & the availability of rooms on campus. The sooner you start, the easier it is to make everyone happy.

- Tell the BISI office you are starting the scheduling process!
- To schedule in BRB or BPS book through the BISI Office.
- To schedule in another building on campus, book through that department but CC the BISI Office.
- Check with the seminar coordinators to see if there are any open dates for student defenses during a BISI or Dept. seminar time.
- Be sure that you have enough time to defend, complete your corrections, and submit your dissertation before the deadline. Deadlines can be found here (we suggest 3 weeks)

☐ Register for Commencement – Once you schedule your defense notify CMNS you want to walk (via this RSVP Form). Then email bisi@umd.edu with your name, as you would like it to appear in the program, and the name of the person that will hood you.

☐ Provide your committee with a complete version of your dissertation at least 2 weeks prior to your defense. Send your abstract to bisi@umd.edu at the same time.

☐ Before your defense: you/your advisor needs to pick up your file and the necessary paperwork from the BISI office. This will include the Report of the Examining Committee and the Interim Exam Report forms.

☐ Immediately after your defense: your advisor should return your file and all forms to the BISI Office.

☐ Complete your corrections and format your dissertation to fit the style guide (at the Grad School site).

☐ Submit an Electronic Thesis and Dissertation Electronic Submission Form to the Graduation Clearance Office.

☐ Submit dissertation on the ProQuest website (http://www.etdadmin.com/cgi-bin/school?siteId=76

Contact the BISI Graduate Office with any questions, 2101 Bioscience Research Building, 301.405.6905

BISI Forms

BISI Rotation Agreement

Name: _____ Date:_____

Concentration area: BEES CBBG MOCB PSYS

First Rotation

Advisor: _____ Start date: _____ Finish date: _____

Advisor expectations for rotation:

Advisor signature _____

Student signature _____

At the conclusion of the rotation, the advisor and student should meet to discuss the student's performance.

Advisor assessment of performance (circle one below):

Exceeded expectations Met expectations Did not meet expectations

Comments (or attachment):

Signature of advisor _____ Date _____

Signature of student _____ Date _____

Second Rotation

Advisor: _____ Start date: _____ Finish date: _____

Advisor expectations for rotation:

Advisor signature _____

Student signature _____

At the conclusion of the rotation, the advisor and student should meet to discuss the student's performance.

Advisor assessment of performance (circle one below):

Exceeded expectations Met expectations Did not meet expectations

Comments (or attachment):

Signature of advisor _____ Date _____

Signature of student _____ Date _____

Third Rotation

Advisor: _____ Start date: _____ Finish date: _____

Advisor expectations for rotation:

Advisor signature _____

Student signature _____

At the conclusion of the rotation, the advisor and student should meet to discuss the student's performance.

Advisor assessment of performance (circle one below):

Exceeded expectations Met expectations Did not meet expectations

Comments (or attachment):

Signature of advisor _____ Date _____

Signature of student _____ Date _____

BISI: Advisor Choice & Agreement Forms

Student name: _____ Matriculation Date _____

Concentration area: BEES CBBG MOCB PSYS

Advisor:_____Department/Institution: _____

Co-advisor: _____Department/Institution: _____

(Required for students with off campus advisors)

For more details see the BISI (www.bisi.umd.edu) and Graduate School www.gradschool.umd.edu) web sites.

Advisor responsibilities:

The advisor is responsible for overall supervision of the student's graduate education, is expected to facilitate the student's participation in all aspects of the program, and should file an annual report on the student's progress. These responsibilities include providing financial support*, either directly from laboratory research funds, or indirectly via the advisor's Department. (Off-campus advisors or their institution are responsible for all normal costs of graduate education and research, and must ensure that resources are available to satisfy the requirements of the student's offer letter).

Advisor responsibilities (for students with off campus co-advisors):

All students whose advisor is not a Regular Member of the UM Graduate Faculty (an "off campus" advisor) are required to have a University of Maryland ("on-campus") advisor. The on campus advisor is termed the student's "Advisor" and the off campus advisor is termed the "co-advisor," according to Graduate School definitions. The on campus advisor is the student's primary point of contact for University- and Program-specific requirements and opportunities, and is expected to maintain a current knowledge of the student's progress toward degree, and should work with student and advisor to ensure that all degree requirements are satisfied. The on campus advisor is *not* financially responsible for the student. The student's Department is defined by the tenure home of the on campus advisor.

I have decided to accept _____ into my laboratory to perform research for their Ph.D. dissertation.

_____Date_____ _____Date_____

Advisor Signature Co-Advisor Signature

_____Date_____

Student Signature

* Financial support is outlined in the student's offer letter, and normally includes salary, benefits, and tuition, in addition to costs related to his/her research activities. For the 2016-17 academic year, tuition costs are $651/credit (in state) or $1404/credit (out of state), with the student assured up to 10 credits of tuition remission per semester. Students supported on campus as RAs or TAs pay in state tuition. Benefits vary depending upon the plan chosen by the student, but range from $600-$1500 per month. *Unless specifically provided for by an inter-institution MOU, graduate students with an off-campus advisor are not automatically assured a teaching assistantship, but must receive the support indicated in their letter*

Description: Statement Of Mutual Expectations

A Statement of Mutual Expectations (SME) is a written document that outlines the fundamental duties of the graduate research assistant and describes the responsibilities of the graduate research assistant and certain processes related to the assistantship. Its purpose is (1) to assist the graduate research assistant in better understanding his/her duties, how to fulfill them and how to meet the supervisor's expectations and (2) to better assist the supervisor with oversight and supervision of the graduate research assistant, and how to facilitate a successful graduate research assistantship for the student. The Graduate School recommends that a SME be prepared at the start of every graduate research assistantship, and for continuing assistantships, updated at least annually. All graduate research assistantships are subject to University of Maryland (UM) policies and procedures as set forth in the Graduate Catalog. Graduate research assistants are not employees, the SME is not a contract, and nothing in the SME supersedes UM policies. In the event of a conflict between UM policies and the SME, UM policies control.

The SME is intended to be a flexible document that provides a structure to help both the graduate research assistant and supervisor understand the nature and obligations of the graduate research assistantship; because of the great diversity of assistantships at Maryland, some of sections of the standard document may not be applicable to all assistantships. Suggested sections to include in the SME are as follows:

Responsibilities of Research Assistant: Include the most important duties of the assistantship. Potential topics would be: specific responsibilities, goals, deliverables (if any) and how they are to be submitted.

Responsibilities of Supervisor: Specify the most important responsibilities of the supervisor (with regard to the assistantship). Potential topics would be: information on how the graduate research assistant will receive continuing guidance and support, times when the supervisor will be available, supervisor office hours, training schedule, a description of the process for project design, how the graduate research assistant will be supervised, procedures for ordering supplies.

Scheduling: When the assistantship is to be performed, including work hours, regularly scheduled meetings, degree of flexibility in work schedule, and/or vacation and holiday procedures.

Procedures and Best Practices: Required training, standard methods, key contacts, required record-keeping, safety and security protocols, and/or procedures for ordering supplies.

Professional Development and Individual Development Plan: Topics include skills to be learned during appointment (if any), training resources other than those provided directly by the supervisor, whether academic publication is expected or desired as a part of the assistantship, and/or potential expectations for travel.

Organizational Culture: Considerations such as office space, work space, dress codes, appropriate titles and means of address, and/or team norms.

Graduate School Policies:
http://apps.gradschool.umd.edu/catalog/assistantship_policies.htm

Useful Resources:
Department of Environmental Safety: http://des.umd.edu
Disability Support Services: http://counseling.umd.edu/DSS/
Institutional Review Board (IRB): http://www.umresearch.umd.edu/RCO/New/index.html
Institutional Animal Care and Use Committee (IACUC):
http://www.umresearch.umd.edu/IACUC/index.htm
Individual Development Plan (IDP) tool offered by AAAS: http://myidp.sciencecareers.org/

Form: Statement of Mutual Expectations

Graduate Research Assistant: _____Supervisor: _____
Period of time of Graduate Research Assistantship covered below: _____

This Statement of Mutual Expectations (SME) is intended to describe and clarify the duties, responsibilities, and procedures that make for a productive appointment as a Graduate Research Assistant. All graduate reserarch assistantships are subject to University of Maryland (UM) policies and procedures as set forth in the Graduate Catalog. Nothing in this SME supersedes UM policies. See http://apps.gradschool.umd.edu/catalog/assistantship_policies.htm. In the event of a conflict between UM policies and this SME, University policies control.

Responsibilities of Graduate Research Assistant (e.g., specific duties, goals, deliverables, reporting)

Responsibilities of Supervisor (e.g., availability, project design, supervision, office hours, training)

Scheduling (e.g., work hours, meetings, vacation and holiday procedures)

Procedures and Best Practices (e.g., training, standard methods, safety and security protocols, ordering)

Professional Development and Individual Development Plan (e.g., skills, training, publication, travel)

Organizational Culture (e.g., office space, work space, dress codes, titles and means of address)

Other Notes:

We have met in person to review and discuss this agreement on the date noted below. The GRA was given an opportunity to ask and receive answers to any questions about the assistantship:

Graduate Research Assistant
Name: _____ Signature: _____ Date:_____

Supervisor
Name: _____ Signature: _____ Date:_____