

NAVIGATING THE GRADUATE PROGRAM
OF
THE DEPARTMENT OF BIOCHEMISTRY AND
MOLECULAR BIOLOGY
AT
THE UNIVERSITY OF GEORGIA

THE HANDBOOK

A HANDBOOK OF PROCEDURES, POLICIES, AND PRACTICES
Updated DECEMBER 2015

TABLE OF CONTENTS

PART A. THE DEPARTMENT

The Research and Academic Missions of the Department	4
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PART B. ADMINISTRATIVE PROCEDURES

1. Who do I ask about...? and Helpful Online Resources	6
2. Communications (e-mail, telephones, mail)	7
3. Office Supplies and Equipment	7
4. Departmental Seminars, General Philosophy and Scheduling	7
5. Books and Journals	8
6. Departmental Vehicles	8
7. Stipend, Fees, and Health Insurance	X

PART C. GRADUATE STUDENT INFORMATION

1. General Policies	10
Annual Progress Reports	10
Academic Appeals	10
Electronic Submission of Thesis	10
UGA Policy Statement regarding Teaching and Laboratory Assistants	10
Outside Fellowships	10
Outside Employment	11
Travel	11
2. Ph.D. Degree	12
Forms	12
Teaching Skills	12
Laboratory Rotations	12
Post-Rotation Requirements	13
Seminars, 8060 Course Requirement	13
Journal Club	13
Major Professor	13
Graduate Advisory Committee	13
Admission to Candidacy	15
Qualifying Examinations	15
Program of Study and Recommended Course Sequences	17
Assisting in Courses	19
Dissertation	19
Departmental PhD Dissertation (or Master's Thesis) Checklist	20
3. M.S. Degree	21
Overview, Forms, Course Requirements, Major Professor, Advisory Committee	21
Thesis Defense, Assisting in Courses	22
4. Grievance Procedures	22
5. Which Forms to Use and When	23
6. Responsibilities of the Major Stakeholders in the BMB Graduate Program	24

PART D. APPENDICES

Deadlines for UGA Award Nominations	27
Deadlines to request travel funds from the Graduate School	28

PART A

The Research Mission of The Department of Biochemistry and Molecular Biology

The Department's research mission is to generate new knowledge and original concepts related to solving basic and applied problems in the fields of biochemistry and molecular biology, broadly defined. Faculty members are pursuing a wide range of research questions related to the structure and function of biomolecules. Internationally recognized and well-funded research programs are established in the areas of extremophile biology, RNA biology, structural biology, enzymology, glycobiology, molecular medicine, plant biology, parasitology, proteomics, and bioinformatics, among others. The Department is enriched by the involvement of its faculty in many highly interactive and interdepartmental research centers that are housed at the University of Georgia. Among these are the following:

The Bioenergy Science Center

The Cancer Center

The Center for Metalloenzyme Studies

The Center for Molecular Medicine

Center for Tropical and Emerging Global Diseases

The Complex Carbohydrate Research Center

The Georgia X-Ray Crystallography Center

The Institute of Bioinformatics

The Southeast Collaboratory for High-Field Biomolecular NMR

In addition, several large, federally funded research resource centers and program project grants provide opportunities for research in stem cell biology, biomedical glycomics, metabolomics, and structural biology. Research faculty have active, funded programs that utilize a diversity of experimental systems, such as prokaryotes (including thermophiles), parasites, plants, *Drosophila* and other insects, zebrafish, mice, rats, and cultured cells from many sources.

The Academic Mission of The Department

The Department's academic mission is to foster in our students the development of independent learning strategies, creative thinking habits, and effective communication skills. The academic programs are designed to encourage the student's innate enthusiasm to achieve. Original research is fully integrated into the graduate (and undergraduate) curriculum of the Department, which prepares students for positions in academia, agrobiological, biotechnology, government, professional post-graduate programs, and other job sectors. The Department provides training toward research-intensive PhD degrees that are highly sought-after by academic, industrial, and governmental agencies looking to hire the best and brightest. Federally funded research programs (NIH, NSF, and/or DOE) provide resources that amply enrich the opportunities for graduate training in diverse research areas. Our current graduate student body consists of more than 60 students from the United States and abroad. The department has historically provided competitive stipends and tuition waivers.

ADMINISTRATIVE PROCEDURES

1. WHO DO I ASK ABOUT...?

Graduate course requirements	Angie Stockton or Graduate Coordinator
Course registration, graduate student files and forms	Angie Stockton
Personnel, payroll, keys, notary public	Angie Stockton
Departmental van, fax	Angie Stockton
Reimbursements	Angie Stockton
Computers, A/V equipment, department listserves	Angie Stockton
Graduate student affairs	Angie Stockton or Graduate Coordinator
Undergraduate course enrollment	Angie Stockton

HELPFUL ONLINE RESOURCES

UGA Biochemistry & Molecular Biology (BMB) Department Website

www.bmb.uga.edu

UGA email and myID account

Register for email account and university myID

www.uga.edu/myid

ATHENA

Online course registration, student account and transcript information

athena.uga.edu

eLC (electronic Learning Commons) at UGA

Used by many instructors to post course syllabi and assignments

uga.view.usg.edu

UGA Parking Services

Register and pay tickets online

If you're going to be parking on campus, get your permit on your first day

www.parking.uga.edu

UGA Health Center

Clinic services, hours and contact numbers

www.uhs.uga.edu

UGA Counseling and Psychiatric Services

Services, hours, and contact numbers

www.uhs.uga.edu/caps/index.html

UGA library

Hours, holdings, online journals and literature services: www.libs.uga.edu

UGA library list of online journals: www.libs.uga.edu/ejournals

Science Citation Index: isi1.isiknowledge.com

Many other reference sources: www.galileo.peachnet.edu

Graduate School

Forms, contact info, and policies (remember that ALL forms get turned into Angie—she will turn them into the graduate school for you and make a copy for your BMB records)

www.uga.edu/gradschool

UGA Student Newspaper

Red & Black (an independent student newspaper): www.redandblack.com

Athens life

Flagpole (local events weekly): www.flagpole.com

Athens Banner-Herald (local daily paper): www.onlineathens.com

2. COMMUNICATIONS

Electronic Mail

All faculty, staff, and graduate students need a university and/or departmental email account (to get a UGA “MyID”, go to www.uga.edu/myid).

All students will receive a uga email acct (@uga.edu). This is the only email address by which the department will officially interact with you. It is your responsibility to keep this mailbox from reaching its capacity.

Telephones

To make a call to an on-campus number, dial the last 5 digits of the number. To make a local, off-campus call, dial 9 + the 10-digit telephone number (area code + number). To make a long-distance call, dial 9 + 1 + the 10-digit telephone number.

Mail (Davison Life Sciences Building, CCRC)

Campus and US mail is delivered and picked up daily. Please remember to affix proper postage to personal mail.

3. OFFICE SUPPLIES AND EQUIPMENT

See Angie Stockton in Life Science Bldg or Karen Howard in the CCRC.

4. DEPARTMENTAL SEMINARS

BMB has instituted a new seminar program run by graduate students with minimal faculty input. Graduate students now host biannual mini-symposia on topics chosen by students. Mini-symposia are designed to maximize student interactions with speakers during breakout sessions. The department will continue to host seminars. Specific faculty or the BGSA invites these speakers, however, these seminars do not occur weekly. Students should consider attendance at departmental symposia and seminars to be mandatory. These events are held at great expense to the Department and feature cutting-edge work in biochemistry and molecular biology. As a community, we should extend this courtesy to our guest speakers that includes attention during the talk and participation in lively question/answer sessions at the end of the seminars. No question is unworthy of being asked. In fact, seminar speakers enjoy questions from students far more than questions from faculty. Do not hesitate to participate in the discussion. The schedule for BMB Seminars is listed on the home page of the BMB website (<http://www.bmb.uga.edu/home/seminars/index.php>).

Seminars for third and fourth year students are part of BMB8060, which is held weekly in B118 Life Sciences. All students are expected to actively participate according to the course outline. Departmental faculty, postdocs and research staff are encouraged to attend.

Ph.D. defenses are scheduled throughout the semester and will normally take place on Wednesdays in the Davison Life Sciences Building or the Complex Carbohydrate Research Center (CCRC). These seminars are special occasions for the Department and are expected to draw broad attendance from faculty, students, postdocs, and research staff. The thesis defense is a momentous event, an opportunity to celebrate the scientific achievements of the Department’s members.

Other departments, centers, and programs at UGA host excellent seminars that you should consider attending. Among them are seminars at the CCRC including the Glycoscience Training Program seminars, the Department of Cell Biology, the Dept. of Genetics, the Program in Developmental Biology, the Center for Molecular Medicine, Institute of Bioinformatics, and the Center for Tropical

and Emerging Global Disease. These seminars are highlighted and advertised to you through specific mailing lists or postings around Davison Life Sciences, the CCRC, or the Coverdell Building. Attendance at these seminars is highly encouraged, to the extent that they are of interest to you or relevant to your research.

5. BOOKS AND JOURNALS

UGA library list of online journals: www.libs.uga.edu/ejournals/

Science Citation Index: isi1.isiknowledge.com/

Current Prot. in Mol. Biol.: www3.interscience.wiley.com/cgi-bin/mrwhome/104554809/HOME

Many other reference sources: www.galileo.peachnet.edu/

Guided tours are available for The Science Library in the Boyd Graduate Research Center.

6. DEPARTMENTAL VEHICLES

A limited number of state vehicles are available for specific purposes related to Departmental or research needs. See Angie (Life Science) or Karen Howard (CCRC) for details and procedures.

7. STIPEND, FEES, AND HEALTH INSURANCE

All graduate students in good standing the BMB department will receive a competitive stipend and a tuition waiver will be automatically requested upon their behalf. Fees and insurance are the responsibility of the student.

PART C

GRADUATE STUDENT INFORMATION C

1. GENERAL POLICIES

Annual Progress Reports

All students, regardless of their source of financial support (Teaching Assistant, Research Assistant, other Fellowship), are encouraged to submit an annual progress report by December 15th of each year (Angie will send these around and collect them). *Students who are planning on graduating during that Fall semester must still file an annual progress report.* Forms will be e-mailed to all students by November 1st and should be returned promptly. One essential requirement for meeting progress expectations is that you will have had a thesis committee meeting during the previous year. The Annual Progress Reports serve two purposes: 1) They ensure that each student is moving forward toward completion of their thesis; and 2) They provide an overview of the state of the Program, facilitating the oversight function of the Graduate Affairs Committee.

Academic Appeals

Students have the right to appeal decisions regarding academic matters. An appeal must be made within thirty days after receiving the written (or e-mail) ruling, and students should ask the Department Head what procedures are appropriate. Grades are appealed within the department or college in which they are earned, which may not be the student's major department or college. In general, appeals should begin at the level at which the decision was made. Therefore, in the case of grades, a student would begin with the instructor. After the instructor, the graduate students' next line of appeal is to the Dean's office for the Graduate School. For appeals regarding departmental programmatic decisions, the first level is to the Graduate Coordinator, then to the Graduate Affairs Committee.

Electronic M.S. Thesis and Ph.D. Dissertations

All theses and dissertations must be filed electronically. See details on the web page at: www.uga.edu/gradschool/academics/thesis.html.

Outside Fellowships

First-year students may be eligible for NSF, NIH, Howard Hughes, or similar national pre-doctoral fellowships. Students are encouraged to apply for outside funding; it is to your advantage and to the advantage of the Department and the University. Some forms are available from the Graduate School. Many deadlines for external fellowships are in early November. Accordingly, most fellowship applications do not require that the student have generated any relevant preliminary data. Fellowship-granting organizations are more interested in assessing the ability of the applicant to present a logical argument in a clear and concise narrative. A member of the Graduate Affairs Committee is available to assist any student interested in applying for external fellowships. The Graduate Coordinator can also steer you toward appropriate resources. See www.uga.edu/gradschool/financial/outside_sources.html for more information. For NSF graduate research fellowships, see www.nsf.gov/grfp.

Outside Employment

Successful graduate study is, at minimum, a full-time endeavor. The faculty of the Department works very hard to maintain the stipend at its maximum, allowable level (within the limits set by the State Government acting through the University Board of Regents). The stipend provides sufficient income for the expected cost of living of a graduate student in Athens, leaving little justification for undertaking other outside employment. Thus, outside employment will result in dismissal from the

program without prior unanimous consent of the mentor, the thesis committee, and the Graduate Affairs committee (that will rarely be given).

Travel

If money is available, the Department may provide travel funds for graduate students to attend scientific meetings. Departmental travel funds are allocated by the Department Head. Students applying for domestic travel money from the Biochemistry Department must also apply for travel funds from the Graduate School, and for international travel from the Office of the Vice President for Research (see below). The principal investigator (major professor) must approve funding from individual research grants.

- i. Students must apply for funds from the Graduate School and meeting organizers (if available).
- ii. Students must be presenting research at the meeting (required by Graduate School).
- iii. Major professors should justify the student's attendance at the meeting.
- iv. Priority will be given to students who do not have access to other travel funds.

If you are traveling on University-related business, regardless of how your expenses are covered, you must complete a travel authority (see Mildred Sparks in Life Sciences or Karen Howard in the CCRC) at least three weeks prior to departure. Airfare can be charged directly to specific grants by an authorized travel agent, but you must complete the travel authority prior to contacting the travel agent. You can also be reimbursed for airline tickets prior to travel. Meals, lodging and other travel expenses will be reimbursed at an appropriate per diem rate after completion of the trip. Upon your return, you must complete a Travel Expense Statement in order to be reimbursed for these expenses. Receipts for lodging, meeting registration, airfare (if not previously submitted), shuttle service, parking, and gas must be submitted with the expense statement. Daily meals will fall under the per diem reimbursement rate.

The Graduate School has limited funds to assist graduate students with travel to present papers at professional conferences within the United States. The Office of the Vice President for Research (OVPR) has limited funds for international travel to meetings. ***Travel requests to either the Graduate School or OVPR must be submitted through Mildred Sparks, and are only accepted for consideration four times per year – see Mildred for more details.***

2. Ph.D. DEGREE

Forms

Forms required by the Graduate School or the department are available at the Graduate School web site (www.uga.edu/gradschool/forms&publications/currentstudent_forms.html), the BMB Department web site (<http://www.bmb.uga.edu/home/graduate>), or from Angie Stockton. Remember that all forms are to be turned in to Angie Stockton who will make a copy for your BMB file and for programmatic review by the Graduate Affairs Committee. Angie will forward completed forms to the appropriate office.

Teaching Skills

The Department values high-quality undergraduate/graduate instruction and provides several mechanisms by which graduate students can practice and improve their teaching skills. First, all graduate students must enroll in GRSC 7770, a course designed to establish clear, minimum

standards for effective teaching. Second, students enrolled in the Departmental Graduate program contribute a significant fraction of the teaching assistants required by the Division of Biology at the University. The Department's long-standing participation in this major teaching effort is a clear indication of the commitment to undergraduate instruction. Further, all students, regardless of status, will serve as graders for departmental courses during the Fall and Spring of their second year in residence. Additional teaching opportunities are available through other departmental programs and all graduate students are encouraged to expand their teaching experiences as allowed by their research progress. Students should discuss their required or planned teaching commitments with their major professor prior to requesting a formal assignment to a specific course.

ILS Laboratory Rotations and Entry into BMB

The ILS Program administers laboratory rotations during the first semester in residence. In the spring, students who join a BMB laboratory for dissertation research will enter the BMB graduate program. At this point, they will register for BCMB 9000. ***All students should also sign up for 1 hour of BCMB 8070 (Laboratory Meeting) and BCMB 8080 (Journal Club) every semester in residence once they have chosen their major advisor.*** The Laboratory Meeting Course serves an important function for most BMB laboratories, providing a forum for organizing the laboratory, discussing data, and exploring new concepts with the laboratory members and the major professor. Upon joining a laboratory, an executed "thesis mentor form" should be turned into Angie Stockton. <http://www.bmb.uga.edu/home/graduate/phdforms.htm>

Seminars

The BCMB8060 course (Biochemistry and Molecular Biology Seminar) consists of three parts: the BMB mini-symposia, BMB scheduled seminars, and the Graduate Student Seminar series. The Graduate Student Seminar Series, organized by the graduate students, provides a valuable opportunity for students to present their research progress to their peers. The Graduate Student Seminar Series meets every Fall and Spring semester for 1 hour. ***All students are expected to give a Graduate Student Seminar in their 3rd (Fall) and 4th (Spring) years of residence.*** This venue provides students with experience in organizing and presenting data to a diverse audience. Students should find this invaluable for their future careers as they prepare seminars for meetings and job interviews. ***All students should register for 2 hours of BCMB 8060 every Fall and Spring semester for which they are enrolled and must attend all of the Seminars.*** In the case of an unavoidable conflict with teaching, or other professional or personal obligations, please contact the course coordinators beforehand.

Journal Clubs

Many journal clubs are offered by various groups within the Department. These journal clubs meet at various times and are generally open to interested students. It is the responsibility of the major advisor to make sure that all graduate students under their direction are participating in a journal club. ***All students should register for 1 hour of BCMB 8080 (Journal Club) every semester for which they are enrolled and should actively participate by giving presentations.*** Journal Club participation provides important experience and a mechanism for students to stay current with the primary literature.

Major Professor

Major professors are selected by mutual agreement between a faculty member and the student. The rotation system, now administered by ILS, is designed to help new students identify major professors appropriate for their research and educational goals. A major professor should be chosen by the

beginning of spring semester of the first year and must be a member of the Graduate Faculty of UGA. Students may change major professors later if appropriate arrangements can be made, although this may result in an extension of the student's tenure in graduate school.

Graduate Advisory Committee

Every doctoral student, with the advice of his or her major professor, will select an Advisory Committee (also more generally referred to as the Thesis Committee) by the beginning of the fall semester of the second year. Once the committee is formed, the "Advisory Committee for Doctoral Candidates" form must be submitted to the Graduate School through Angie Stockton in the BMB front office.

The Advisory Committee will have a minimum of 4 faculty members, including the student's major professor. The committee must be approved by the Graduate Affairs Committee and include at least two members of the BMB Department (regular faculty). A minimum of three members of the Advisory Committee must be members of the graduate faculty of UGA. Persons employed by The University of Georgia and who hold the following ranks may serve on doctoral committees: professor, associate professor, assistant professor, public service assistant, public service associate, senior public service associate, assistant research scientist, associate research scientist, and senior research scientist. Persons having the following ranks may not serve on doctoral committees in an official capacity: instructors, lecturers, and academic professionals. In addition to the regular committee members, a person having no official relationship with The University of Georgia may be appointed to serve as a voting member on the advisory committee of a graduate student on nomination by the graduate coordinator and approval of the dean of the Graduate School. When nominating a non-affiliated person, the graduate coordinator must submit the nominee's current resume with the appropriate forms and a letter addressed to the dean of the Graduate School explaining why the services of the non-affiliated person are requested. A person nominated must have distinguished credentials in the field of study. A non-affiliated person appointed to a graduate student's committee must attend meetings associated with the appointment.

The composition of the Advisory Committee can change over the course of the student's graduate career as needed to ensure that the most appropriate advice is available to guide the evolving thesis project. Changes in Advisory Committee membership should not violate the general guidelines for composition of the committee (see above). The Graduate Affairs Committee should be notified in writing of Advisory Committee changes as soon as possible, but before the first Advisory Committee meeting is held with the new members. A new "Advisory Committee for Doctoral Candidates" form will need to be filed with the Graduate School through Angie Stockton. The first meeting of the advisory committee will be held by the end of the fall semester of the second year to help the student design a plan of study and plan the qualifying exam. Permission to delay the first committee meeting must be obtained from the Graduate Affairs Committee. By the end of fall semester of the student's second year, a "Preliminary Doctoral Program of Study" form must be submitted to the Biochemistry Department through Angie Stockton.

Responsibilities of the Graduate Advisory Committee:

- i. A student's Advisory Committee must meet at least once a year. The student should schedule meetings. Committee members are expected to provide as much flexibility as possible to meet this high priority need of the Graduate Program. Following each meeting, committee members must sign an "Annual Evaluation of BMB Graduate Students" form. These reports are required as part of the annual evaluation of graduate student progress.
- ii. It is the expectation of the BMB Graduate Program that students should be able to complete their course of study within five years. The deliberations of the Advisory Committee should

balance this goal against real progress in the student's thesis work to achieve the best possible outcome.

- iii. The Advisory Committee will prepare, administer, and grade qualifying examinations.
- iv. Members of the Advisory Committee should be available to the student for advice and guidance beyond the confines of the annual meeting. Students should expect that Advisory Committee members are a resource for both scientific considerations and also for discussing topics related to professional development.

Admission to Candidacy

Students must pass a comprehensive qualifying examination before becoming a candidate for the PhD degree. The qualifying examination should be completed by the end of the Spring semester of the second year and must be completed by the end of the following summer. Failure to take the oral exam by the end of the Spring semester will be considered inadequate progress and may affect the student's financial support, ability to register, and academic standing. In exceptional circumstances, a student may petition the Graduate Affairs Committee to delay taking the oral exam.

Qualifying Examination

Overarching Purpose: To verify that the graduate student has immersed herself or himself in their chosen field of study, and has a sufficient grasp of key concepts, hypothesis building, and experimental design to warrant progression towards candidacy.

The qualifying exam is comprised of two parts: a written research proposal based on the student's planned dissertation research, and an oral exam based on the presentation and defense of this proposal. The oral defense expects mastery of a broad knowledge base related to the student's proposed research. Therefore, the student should expect that oral exam questions from Advisory Committee members will range beyond the narrow boundaries of the written proposal, probing for evidence that the student has acquired comprehensive knowledge related to the biochemical and molecular principles underlying their thesis proposal. One purpose of this exam is to evaluate the student's ability to identify a hypothesis or question, and develop a practical and coherent experimental approach to address it and its ramifications. Another purpose is to encourage the student to focus as soon as possible on developing a viable dissertation subject. The qualifying exam will be graded pass or fail (requiring a minimum of 3 members of the committee to agree for a passing grade, including the major professor (PI)). Note that the Graduate School and Program allow the Qualifying Examination to be retaken one additional time if a failing grade is achieved upon initial attempt to complete. All members of the student's Advisory Committee must be present for the oral exam, either in person, or by teleconference, if necessary. Qualifying exams should be taken in the Spring of the graduate student's second year in residence and no later than the following Summer semester. Failure to complete the first attempt by the end of the Summer semester will be treated as if the student had failed both attempts to pass the qualifying exam.

According to UGA Graduate School rules, the oral exam is open to the public. The Graduate School will publish notice of the exam, and send the required paperwork to the student's PI for Advisory Committee signatures. The student's name, department, title of presentation, time, and place is required. **BMB requires** that all the information be e-mailed directly to Angie Stockton (angie1@uga.edu), at least three weeks before the planned examination date, and she will send all relevant information on to the Graduate School.

Research proposal guidelines. The written research proposal will take the form of the narrative portion of an NIH or NSF predoctoral grant proposal. The format of the proposal should generally follow NIH or NSF grant preparation instructions. Please use Arial 11, single-spaced with numbered pages, and not less than ¾" margins all around. Total length should be at least 8 pages and not exceed 12 pages, including figures and tables but excluding references. In general, the proposal should include the following:

- i. A "Specific Aims" section that provides a short introductory paragraph or two, which presents the major hypotheses being tested, and 2-4 specific aims to be accomplished during the thesis work (≤1 page).
- ii. A "Background and Significance" section that reviews the essential background related to the project and highlights the significance of the research. Progress and limitations in the field should be discussed. The student should demonstrate a comprehensive understanding of the relevant literature, but should also be concise, selectively discussing the most important experimental paradigms and key results in the context of the goals of the thesis proposal (3-5 pages). This section is much longer than in a typical grant and would need to be cut down to 1 page if you are considering submitting this proposal to a funding agency.
- iii. A "Preliminary Results" section is optional, but a minimal presentation of relevant results can be a valuable addition to assist the Advisory Committee's evaluation. The results need not be generated by the student's own efforts, but the work of others should be appropriately credited (0-2 pages).
- iv. The "Experimental Design" section (4-6 pages) should outline specific experimental approaches that will be applied to each aim, including appropriate controls, possible outcomes, potential pitfalls, and alternative approaches. A short concluding section should summarize how the field will be advanced by the study, and provide a realistic timeline and an overview of the research priorities.
- v. The proposal should be concisely written. Tables and Figures should be numbered, clearly referred to and embedded in the text, and presented with informative legends (Arial 10 is acceptable) that are included in the page limit. The document should be completely referenced (Literature Cited) with full citations (not included in the page limit).
- vi. The proposal must be presented via email to the Advisory Committee at least ten working days before the oral preliminary exam.

The purpose of the written proposal is to evaluate the student's ability to develop and present a coherent, logical, and well-thought-out research project in the area of their thesis research. Therefore, while the student may consult with his/her major professor regarding the written proposal prior to distributing it to the committee, the proposal should represent the student's independent work and thinking. After the Qualifying Exam, it is expected that future research progress may mandate changes in the aims and experimental approaches of the project. These evolving targets should be actively discussed in the annual Graduate Advisory Committee Meetings and it should be clear that the proposal is not a contract of work to be executed. It is important to note that a student can request an Advisory Committee Meeting at anytime. Committee meetings need not be limited to one per year. Students, in consultation with their major professor, are primarily responsible for obtaining the advisement needed to ensure timely progress toward completion of thesis research.

Oral exam guidelines. The oral exam will usually begin with each committee member except for the PI (who is present but who is strongly encouraged NOT to participate in the discussions) asking a general knowledge question related to the written proposal. The oral exam will then continue with the student delivering an oral presentation with slides of the written research proposal. At any time

during the presentation, the committee (and any other faculty members of the BMB Department who may be present) may question the student on any subject that they deem to be relevant. In order for the oral exam to assess the student's own capacity for independent thinking, the major professor should not speak during the exam. To this end, the senior-most member of the Advisory Committee will serve as the presiding chair of the oral examination. If deemed necessary by the presiding chair, the major professor may clarify some questions or may question the student in limited areas. Although there is no specified time limit, the oral exam generally lasts ~2 hours.

Qualifying exam grades. A student may obtain the grade of “pass” or “fail” for the qualifying exam. This assessment is based on the combined quality of the written proposal and the oral defense. No more than one dissenting vote is permitted and PI’s vote of approval is required for the student to pass the examination. After completion of the oral examination, the Advisory Committee may determine that the student has a particular area (or areas) of weakness requiring remediation. In this case, the student may be required to perform additional coursework, directed reading, and/or additional written work before taking the exam for the second and final time. In conjunction with retaking the oral exam, the committee members may also require that the student rewrite the research proposal in part or in its entirety.

It is expected that some students may receive a “fail” on their first attempt. The second attempt must take place no later than the Fall of the graduate students third year in residence. In general, it is expected that the second attempt receives an independent, unbiased evaluation such that, if a “pass” is achieved, the student is accepted into candidacy without prejudice relative to those who passed the first time around. If a grade of “fail” is assigned by the Advisory Committee on the second attempt or if the student fails to retake the exam during the assigned time, the student will be considered to have not successfully achieved PhD candidacy and should work with their major professor, their Advisory Committee, and the Graduate Coordinator to negotiate their relationship with the Graduate Program. In some instances, it may be appropriate for the student to complete the requirements for a Master’s degree. In some instances, the student will not be allowed to continue in the program. In all cases of failed qualifying examinations, the Advisory Committee, the major professor, and the Graduate Coordinator are collectively charged with the task of assessing the student’s likely capacity to make timely progress toward completion of a defensible Master’s thesis, and with the responsibility of providing reasonable guidance during the student’s transition to other endeavors.

Formal Admission to candidacy. The student must petition for admission to candidacy following successful completion of the written and oral components of the qualifying examination. This petition requires filling out the appropriate Graduate School form, which is provided to the major professor prior to the oral examination. As part of their application for admission to candidacy, students must provide the Graduate School with their “Final Doctoral Program of Study”. All forms should be turned into Angie Stockton, who will make sure that everything is in order and then submit them to the Graduate School. Following admission to candidacy, there is a two-semester minimum residency requirement before the student can graduate. Upon admission to candidacy, the minimum stipend for the student is increased based on the allowable level prescribed by the University of Georgia Board of Regents.

Program of Study and Recommended Course Sequences

A “Preliminary Doctoral Program of Study” form should have been completed by the student and filed within the Department by the end of the Fall semester of the second year. The “Final Doctoral Program of Study” will be developed in consultation with the major professor and the Advisory Committee. The Final Program should be forwarded to Angie Stockton, who will file it with the Graduate School upon successful completion of the qualifying exam. Course recommendations are

further described below. The Graduate Affairs Committee can waive course requirements, so long as the student's Advisory Committee supports the waiver.

Required of all PhD students:

- i. All students are required to take at least 30 hours of 8000 level courses, including 3 hours of BCMB 9300 (Doctoral Dissertation) in the final semester.
- ii. All students are expected to enroll for 18 hours each semester, except for summer. During summer semesters they are expected to take at least 15 hours. The last semester for a student must include 3 hours of BCMB 9300.
- iii. All Students must enroll in BCMB 8060 (2 credit hours every Fall and Spring), BCMB 8070 (1 credit hour every semester once a laboratory is chosen), and BCMB 8080 (1 credit hour every semester once a laboratory is chosen)
- iv. International students whose native language is not English (*i.e.*, those required to take the TOEFL) are required to take the Test of Spoken English (TSE) or its institutional equivalent, the SPEAK Test, before being considered for a teaching assignment. Questions about these requirements should be directed to the Graduate Affairs Committee.
- v. BCMB 9000 (Doctoral Research) may be taken for up to 14 hours a semester (S/U).
- vi. Doctoral students must be enrolled in BCMB 9300 the semester they graduate.

Summary of Required Course Work for all Graduate Students (a grade higher than C+ must be obtained to count towards fulfilling requirements):

- i. BCMB 8112 and BCMB8212 (8 hours)
- ii. 8 hours of 8000 level electives.
- iii. BCMB8060 (2 credit hours), all Fall and Spring semesters in residence.
- iv. BCMB8070 (1 credit hour), all semesters.
- v. BCMB8080 (1 credit hour), all semesters.
- vi. BCMB9300 (3 credit hours), final semester in residence.

Typical Graduate Career, Courses (credit hours):

YEAR 1

Fall: ILS Directed. Choose BMB Major Professor at End.

Spring: BCMB8112 (4); Potential Elective; BCMB8060 (2); BCMB 8070 (1); BCMB8080 (1); BCMB9000 (to 18 hours total).

Summer: BCMB8070 (1); BCMB 8080 (1); BCMB9000 (13). Form Advisory Committee.

YEAR 2

Fall: BCMB8212 (4); BCMB 8060 (2); BCMB8070 (1); BCMB8080 (1); Elective(s); BCMB9000 (to 18 hours total). Serve as Grader for BMB and hold first committee meeting.

Spring: BCMB8060 (2); BCMB8070 (1); BCMB8080 (1); Elective(s); BCMB9000 (to 18 hours total). Serve as Grader for BMB and complete Qualifying Exam.

Summer: BCMB8070 (1); BCMB8080 (1); BCMB9000 (13). Address any Qualifying Exam requirements and obtain candidacy.

YEAR 3

Fall: BCMB8060 (2); BCMB8070 (1); BCMB8080 (1); Elective(s); BCMB9000 (to 18 hours total). Present research progress in 8060 and hold Advisory Committee meeting (Fall or Spring). Must matriculate to Candidacy this semester at the latest.

Spring: BCMB8060 (2); BCMB8070 (1); BCMB8080 (1); Elective(s); BCMB9000 (to 18 hours total). Hold Advisory Committee meeting if not done in Fall.

Summer: BCMB8070 (1); BCMB8080 (1); BCMB9000 (13). Hold Advisory Committee meeting if not done in Fall or Spring.

YEAR 4

Fall: BCMB8060 (2); BCMB8070 (1); BCMB8080 (1); Elective(s); BCMB9000 (to 18 hours total). Hold Advisory Committee meeting (Fall or Spring).

Spring: BCMB8060 (2); BCMB8070 (1); BCMB8080 (1); Elective(s); BCMB9000 (to 18 hours total). Present research progress in 8060 and hold Advisory committee meeting if not done in Fall.

Summer: BCMB8070 (1); BCMB8080 (1); BCMB9000 (13). Hold Advisory Committee meeting if not done in Fall or Spring.

YEAR 5 AND BEYOND

Fall/Spring: BCMB8060 (2); BCMB8070 (1); BCMB8080 (1); Elective(s); BCMB9000 (to 18 hours total). Hold yearly Advisory Committee meeting. Sign up for BCMB9300 (3) in semester of anticipated graduation.

Summer: BCMB8070 (1); BCMB8080 (1); BCMB9000 (13). Hold yearly Advisory Committee meeting if not done in Fall or Spring. Sign up for BCMB9300 (3) in semester of anticipated graduation.

Assisting in Courses

All graduate students (Master's and Doctoral, TA and RA) must serve as graders for the Department during the Fall and Spring of their second year in residence. Departmental teaching needs vary from year to year. Therefore, the Graduate Coordinator will annually inform students of their teaching assignments.

Dissertation

Doctoral students must submit their dissertations to their major professors before distributing them to their Advisory Committees. The format of the dissertation falls under the discretion of the Advisory Committee but also must meet the requirements outlined by the graduate school. It may be written as a series of papers already published or ready for publication, bracketed by an introductory/background survey chapter and a concluding chapter that places the entire body of work in context and indicates reasonable future directions. Alternatively, the student may prepare a thesis that is not restricted by the practical boundaries imposed on the content of published papers. Chapters that present data unlikely to be published or provide unique insight into any aspect of the project are welcome additions to a PhD thesis, so long as the Advisory Committee and the major professor concur regarding the value of the content. Once approved by the major professor, the dissertation must be submitted to the student's Advisory Committee members at least ten working days before the defense seminar is held. Three weeks before the anticipated defense date, the student must also notify Angie Stockton by letter, so that she can notify the Graduate School two weeks in advance of the final defense. This notification letter, addressed and hand-delivered to Angie Stockton, must be signed by the Graduate Coordinator or Dissertation Advisor (major professor), and

must include the student's name, the title, the time, and the place of the defense seminar. It is *strongly encouraged* that all dissertation defense seminars be held at 11:10 a.m. on a Wednesday in C-127. All students, staff, and faculty of the department are highly encouraged to attend the dissertation seminar. If it is not possible to hold the defense seminar at the advised time, the student and major advisor may petition the Graduate Coordinator to hold the seminar at another time and venue. Following the seminar, the student should be prepared to defend the contents of the dissertation before their Advisory Committee members and any other BMB Department faculty member that might choose to participate. After the defense, students may be required by their Advisory Committee to make revisions to the dissertation prior to submitting the final copy to the Graduate School. Therefore, scheduling of defense seminars should take into consideration the possible need for completing revisions before the University's submission deadline.

BMB DEPARTMENT PHD DISSERTATION (OR MASTER’S THESIS) CHECKLIST

**Date
Completed**

- _____ Application for Graduation submitted to Graduate School no later than Friday of the first full week of classes the semester of the anticipated graduation date through Angie Stockton.
- _____ Dissertation/Thesis approved by major professor.
- _____ Dissertation/Thesis submitted to Advisory Committee at least two weeks before scheduled defense.
- _____ Arrangements made (through Angie Stockton) for final defense three weeks before the defense. Arrangements are also made for a conference room after the defense.
- _____ Seminar notice turned in to Angie Stockton.
- _____ Graduate School notified of date of Final Defense through Angie Stockton. Send time, place, title and names of Advisory Committee members. Must be received by Graduate School two weeks prior to exam date, so provide to Angie three weeks before exam date.
- _____ Approval Form for Doctoral Dissertation (or Masters Thesis) and Final Oral Examination completed and turned in to Graduate School through Angie Stockton.
- _____ Corrections (requested by Advisory Committee) on dissertation/thesis completed.
- _____ Dissertation signed by major professor and Advisory Committee in BLACK INK.
- _____ Signed dissertation/thesis format checked in thesis office (prior to making official copies). Should be done approximately two weeks before graduation. See electronic form at www.uga.edu/gradschool/academics/thesis_format_check.html.
- _____ Official copies of dissertation/thesis made. For paper copies, be sure to contact the Tate Center Print and Copy Services.
- _____ Applicable fees paid at Treasurer's Office. Keep receipt to show at Graduate School when submitting dissertation/thesis for approval.
- _____ Complete electronic submission.
- _____ Official copies of dissertation/thesis delivered (in a large envelope or box) to the periodicals desk in the basement of the new annex of the Main Library for binding.
- _____ Arrange with major professor for handling of personal copies of dissertation/thesis.
- _____ Laboratory space cleaned, departmental keys returned, and Departmental Exit Survey completed and given to Angie Stockton (including your forwarding address).

3. M.S. DEGREE

Overview

The Department does not encourage applications for admission from students wishing to achieve a terminal Master's degree. However, the Department recognizes that, under certain circumstances, it may be advantageous to have guidelines in place for the granting of a terminal M.S. degree. In general, the course requirements for the M.S. degree are identical to the PhD degree. A final Master's thesis is required to achieve the degree. The nature and content of the thesis are determined in consultation between the student, the major professor, and the Advisory Committee. All programmatic requirements (seminar attendance, timely formation of Advisory Committee, presentation of thesis seminar, professional expectations) described for the PhD degree also apply to the MS degree.

Forms

Forms that must be submitted to the Graduate School or the department are available at the Graduate School web site (www.uga.edu/gradschool/forms&publications/currentstudent_forms.html), the BMB Department web site (<http://www.bmb.uga.edu/home/graduate/phdforms.htm>), or from Angie Stockton. Please remember that ALL forms are to be turned into Angie and she will make copies and then send them to the appropriate office.

Course Requirements

All Graduate School requirements for a master's degree must be completed within the six-year time limit beginning with the first registration for graduate courses listed on the program of study. Course requirements are the same as for the Ph.D. degree (see below) and consist of at least 30 semester hours of graduate-level courses. These 30 hours must include at least 21 hours of graduate course work exclusive of 7000 (research) and 7300 (thesis writing). Twelve of these 21 hours must be courses that are restricted to graduate students. The program of study must include a minimum of 3 hours of 7300 (thesis writing). The remaining six hours may be 7000 (research), 7300 (thesis writing), or any other appropriate graduate coursework. Courses not counting towards the program of study include GRSC 7770, GRSC 9270, and ELAN 7768/7769. All M.S. students are required to give a 3rd year seminar in the Fall and a 4th year seminar in the Spring if they are still in attendance.

Major Professor

The major professor for master's students must be a member of the Graduate Faculty of UGA. For further description of major professors, see discussion under Ph.D. degree. A major professor must be chosen by the end of the second semester of enrollment. Delay beyond this point in choosing a major professor must be approved by the Graduate Affairs Committee.

Master's Advisory Committee

Every master's student shall have a committee of four faculty members (a minimum of two MUST be BMB primary faculty, not adjunct) selected by the end of his or her third semester in graduate school. The committee will be formed in consultation between the student and the major professor. Once committee members are selected the "Advisory Committee for Master of Arts and Maser of Science Candidates" form must be submitted to the Graduate School through Angie Stockton in the BMB office. The functions of the advisory committee include evaluating the student's progress and approving the student's plan of study, advising the student on required research skills, guiding the thesis research, administering the thesis defense and final examination, and evaluating and approving the student's master's thesis.

The advisory committee must include two BMB faculty members. The major professor and at least two other members of the Advisory Committee must be members of the Graduate Faculty of UGA. The fourth member may be a member of the graduate faculty or a person with a terminal degree holding one of the following ranks at the University of Georgia: professor, associate professor, assistant professor, public service assistant, public service associate, senior public service associate, assistant research scientist, associate research scientist, or senior research scientist. A UGA employee who holds one of these ranks or who holds a terminal degree in his/her field may be appointed as a fourth member upon approval by the departmental graduate faculty and the dean of the Graduate School. The fourth member can also be a faculty member of another institution with a terminal degree in his/her field of study.

The first advisory committee meeting should take place no later than the fall semester of the second year. Permission to delay the first committee meeting must be obtained from the Graduate Affairs Committee. After the first advisory committee meeting, the student should file the "Program of Study for Master of Arts and Maser of Science Candidates" form to the Graduate School.

Thesis Defense

Master's students must submit their theses to their advisory committees at least two weeks before their scheduled defense seminar. The major professor should approve the thesis before it is submitted to the committee. Following the oral presentation, the student should be prepared to defend the contents of the thesis before their advisory committee in a formal meeting and before any faculty member of the BMB Department.

Assisting in Courses

The requirement is the same as for Ph.D. students.

4. GRIEVANCE PROCEDURES

All graduate students have the right to have their grievances heard and to seek appropriate changes in their academic or research programs. Grievances regarding grades are handled through an appeal process that runs through the instructor to the Dean's office of the relevant College. Grievances regarding the Graduate Program are initially handled through the Department. Should a grievance arise, the student's first course of action is to discuss it with their major professor and/or Advisory Committee. In addition to resolving interpersonal issues (mentor-student conflicts) and professional disputes (authorship, laboratory citizenship, etc.), the student's Advisory Committee may also be involved in resolving grievances related to the direction or endpoints of the student's thesis work. The student and faculty member (or members) involved must make every effort to resolve problems at this level. Only if the problem cannot be solved at this level should the student seek to present his or her grievance to the Graduate Coordinator. The Graduate Coordinator will determine whether the grievance should be referred to the Graduate Affairs Committee or the Department Head for further evaluation. In any case, all students are entitled to have their grievance heard and to carry it forward, in succession, to the Graduate Affairs Committee, the Department Head, and the Graduate School. Grievances brought to the Graduate Affairs Committee should be presented in writing. The Graduate Affairs Committee will proceed forward as dictated by the nature of the grievance.

5. WHICH FORMS TO USE — AND WHEN

Form titles are in bold letters below and are available electronically, at the BMB Department (www.bmb.uga.edu/home/graduate/phdforms.htm) and Graduate School websites (www.uga.edu/gradschool/forms&publications/currentstudent_forms.html). Most forms are also available from Angie Stockton. Students meeting Graduate School deadlines must allow ample time

to get the necessary departmental approval and signatures (*e.g.*, the major professor and Graduate Coordinator) in advance. REMEMBER, all forms are to be turned in to Angie Stockton in the BMB front office of Life Sciences. Although the Graduate Coordinator and Angie Stockton will advise students of deadlines whenever possible, **students hold the primary responsibility for being aware of Graduate School and Departmental requirements and filing appropriate forms on time.**

Note: Completing degree requirements and graduation are not synonymous. The student must be registered during the semester in which degree requirements are completed, but need not actually graduate until the following semester. If a student wishes to graduate in the same semester in which degree requirements are completed, he or she must submit the thesis to the Graduate School for approval at least two weeks before the graduation date and must submit the thesis approval form to the Graduate School at least one week before the graduation date. If the student does not meet these deadlines, however, he or she is considered registered until the registration period for the next semester and may use that additional time to submit the thesis or dissertation and the approval form. Registration for the subsequent semester will not be required and a letter will be received from the Graduate School stating that all degree requirements have been met and that graduation will occur the subsequent semester. Students receive periodic updates on their status from the Graduate School.

6. RESPONSIBILITIES OF THE MAJOR STAKEHOLDERS IN THE BMB GRADUATE PROGRAM

Responsibilities of Graduate Students

- i. Know the University's policy and procedures on academic honesty and adhere to the University Student Honor Code: ***"I will be academically honest in all of my academic work and will not tolerate academic dishonesty of others."*** The policies and procedures on academic honesty are described in **A Culture of Honesty** (available at www.uga.edu/ovpi/honesty/culture_honesty.htm) and all students hold the responsibility to understand and follow these guidelines.
- ii. Meet all deadlines imposed by the Department and the Graduate School. The Graduate School provides the Graduate Coordinator with a list of deadlines every semester. This list is forwarded to students by e-mail. University and Graduate School degree requirements are officially described in the Graduate School Bulletin and students are strongly advised to consult this resource as needed.
- iii. Complete and file all necessary forms with the Graduate School in a timely manner. In many cases (described in this document) these forms can and should be filed through the Department (Angie Stockton). In all cases, any form submitted to the Graduate School should also be copied and provided to the Department.
- iv. Actively contribute and participate in the overall graduate program of the Department. Such participation includes attending Departmental Seminars and other functions, contributing to graduate student and faculty recruitment, and engaging fully in the intellectual and academic life of the Department.
- v. Assume a proactive nature in pursuing your goals for graduate education. The faculty and staff of the Department are strongly invested in the success of the program and are willing to help you fulfill your goals. But, keep in mind that this is YOUR graduate degree. The faculty and staff are here to help YOU help YOURSELF.

Responsibilities of the Graduate Affairs Committee

- i. Monitor progress in the program as a whole to ensure that students are moving toward completion of their degrees. Students are expected to complete their doctoral degrees in five years. The GAC committee will evaluate student progress each year and may elect to meet with senior students, their major professor, and other members of their advisory committee as needed to ensure progress.
- ii. Monitor the progress of first year students before selection of a major professor. The Graduate Affairs Committee will evaluate the progress of any student who has yet to identify a major professor by the end of the first summer semester. The Committee will vote as to whether unassigned students should continue in the Doctoral Program.
- iii. Hear student appeals regarding programmatic grievances. Depending on the nature of the grievance, the Committee may involve the Department head, members of the Advisory Committee, and/or the major professor. The Grievance procedures should respect the integrity and concerns of all parties.
- iv. Organize Departmental Orientation activities for incoming graduate students during the first weeks of the Fall semester.
- v. Provide leadership for introducing innovation and initiating self-evaluation of the Graduate Program at all levels. The input of graduate students will be solicited whenever possible as changes in the program are considered. Likewise, graduate student initiatives for specific program modifications are welcome and are due full consideration by the Committee.
- vi. Work together with the Graduate Recruiting Committee, faculty, and graduate students to enhance recruitment of new students.
- vii. Identify opportunities for students to apply for external fellowships.

Responsibilities of BMB Faculty Members

- i. Provide the best possible environment for graduate training in laboratories and courses.
- ii. Welcome graduate students for rotations as laboratory resources allow, keeping in mind that rotations need not be a commitment to accept a student as a permanent lab member. Rotations should provide a broad range of opportunities for students to explore many aspects of biochemistry and molecular biology, independent of any long-term considerations.
- iii. Serve on Graduate Advisory Committees as often as is reasonable. Service need not be restricted to the committees of students whose research is within a faculty member's area of expertise. An outside point-of-view can be valuable and all students should be able to effectively present their work to non-experts.
- iv. Encourage students to attend all Departmental Seminars and other Departmental academic functions. Become a role model for seminar attendance.
- v. Provide both scientific and professional mentoring as students move through their qualifying exams and develop into valuable laboratory colleagues. Encourage attendance at conferences and seek other opportunities for students to explore the best options for their future life beyond the Departmental Graduate Program.

APPENDICES

