Guidelines for Master's Students

Department of Biology

American University

Revised August 19, 2014

Introduction

This document details the academic and research expectations of students enrolled in the Masters of Science (MS) or Masters of Arts (MA) program in the Department of Biology. Each program can be successfully completed in two years if one follows the suggestions outlined below. The central focus of each program is the independent work done to develop expertise in a particular field of Biology, whether through comprehensive literature research (MA) or laboratory and/or field research (MS). This endeavor is supervised by a faculty member or associate of the Department of Biology who acts as the student's graduate advisor. A student should identify the graduate advisor and the research topic by the end of the first semester of academic study. Research Methodology (BIO-697) is a required course designed to help graduate students follow this recommendation. The Chair of the Department's Graduate Studies Committee may also help in this process. Interactions and communication are always strongly encouraged between the students and the faculty during the entire two-year program.

Graduate students make very important contributions to the academic life of the Biology Department in their roles as scholars in course work, as investigators in thesis research and writing, and as teaching assistants in student laboratories. An orientation program is held each fall and winter in the week before classes begin. This orientation has components organized by both the University and the Department. All graduate students should plan to participate in the appropriate portions of this orientation, where information in these Guidelines and about graduate life at American University is presented.

Important dates for AY 2014-2015

The complete academic calendar is available online at:
http://www.american.edu/loader.cfm?csModule=security/getfile&pageid=3814861

Fall 2014
Aug 25 – start of classes
Nov 3 – Spring 2015 priority registration for graduate students begins
Nov 7 – theses and dissertations due in Dean's office for fall degree candidates
Dec 18 – theses and dissertations due in Registrar's office for fall degree candidates

Spring 2015
Jan 12 – start of classes
March 30 – theses and dissertations due in Dean's office for spring degree candidates
April 1 – Fall 2015 priority registration for graduate students begins
April 27 – theses and dissertations due in Registrar's office for spring degree candidates
May 9 – CAS commencement

Summer 2015
July 17 – theses and dissertations due in Dean's office for summer degree candidates
August 6 – theses and dissertations due in Registrar's office for summer degree candidates

Degree Requirements

Four graduate degree programs are offered by the Department: (1) Master of Science degree (MS), (2) Master of Arts degree (MA), (3) a five-year BS/MS degree, and (4) a five-year BS/MA degree. The latter two combine the undergraduate and graduate programs. Regardless of the graduate program, all students much complete the following requirements:

- **Course Requirements –**Completion of the required course sequence and electives (30 credit hours total). A cumulative GPA of 3.0 or better is also required for completion of the MS or MA degrees
  MA: 15 required and 15 elective credits
  MS: 18 required and 12 elective credits
- **Research -** Complete independent and original research (MS) or literature research (MA) under the supervision of the research advisor who must be a full-time faculty member in the Biology Department.
- **Proposal Defense -** Advance to candidacy upon acceptance of the research proposal by the research committee and the departmental chair (MS only) at least one semester before defense of the final written thesis. The proposal defense also serves as the forum in which the thesis component of the comprehensive examination is completed.
- **Comprehensive Exam -** Pass a comprehensive examination appropriate to the course work and research focus before the thesis defense. This is also required for advancement to candidacy. Students must past the comprehensive exam at least one semester before the semester in which they complete their oral thesis defense.
- **Oral Thesis Defense -** Prepare and orally defend a written thesis acceptable to the thesis committee, the departmental chair, and the University (MS); or, prepare and orally present a written literature review paper on a topic acceptable to the graduate studies committee and the departmental chair (MA).

Other important sources of information for graduate students include the American University Catalogue. The edition for a student's year of matriculation constitutes a binding commitment on the part of the University. The section on the Department of Biology contains the definitive list of degree requirements. Sections on graduate studies and on financial aid are also important. Copies of the current catalogue are available at the Office of Admissions and Financial Aid in Hamilton Hall. Back copies may be examined in the Biology Department office.

Graduate Academic Rules and Regulations were updated in Spring 2012. The new regulations are effective beginning AY 2012-2013 and a complete copy can be found on the AU website.

"The American University Guide to Preparation of Theses and Dissertations", revised in 2002, documents university requirements concerning formats for thesis proposals and thesis manuscripts. Copies may be obtained from the chair of the Biology Department Graduate Studies Committee, or from the Graduate Affairs Office in the College of Arts and Sciences.

Combined (5-year) Bachelor's/Master's degree

Students who are in good academic standing and interested in the 5-year BS/MS or 5-year BS/MA degree programs can apply for Master's program after they have completed 75-90 credit

hours of coursework at the undergraduate level. This typically occurs during the junior year. Only in rare cases will students applying to the 5-year program during their senior year be admitted to the program. Students are encouraged to speak with the Chair of the Department's Graduate Studies Committee prior to applying and during the application process. Upon acceptance, the student will be enrolled in both the undergraduate degree program and the graduate degree program. The student must complete all requirements for the BS degree first. Once all undergraduate requirements are satisfied and the degree completed in good academic standing, the student will be enrolled in the Master's program and considered a graduate student.

Once admitted to the program, students will work with the Chair of the Graduate Studies Committee to develop a timeline and program of study for their 5-year program. At this time, the student will also indicate which courses, taken while the student is an undergraduate, will be applied to the graduate degree. Up to 9 credit hours of graduate coursework (500-level or higher) can be applied to the requirements for both the BS and Master's degrees.

Course Requirements

See the American University Catalogue for details of required course work. Currently, all graduate students are required to complete the following courses in partial fulfillment of either an MA or MS Biology degree:

- BIO-566 Evolutionary Mechanisms (3)
- BIO-697 Research Methods (3)
- BIO-583 Molecular Biology (3)
- STAT-514 Statistical Methods – ***Biology section*** (3)
- BIO-797 MS thesis research (6) **OR**
  BIO-790 MA Literature research (3)

The remaining credits are to be obtained through elective graduate courses and total 12 credit hours for the MS degree or 15 credit hours for the MA degree.

The electives can be BIO-500-level courses or graduate-level courses offered in other departments at AU, but they must support the student's thesis research interests. Graduate-level electives can also be taken from within the consortium if they are not offered at American University. It is very important that the graduate student consult with his or her graduate advisor before deciding on an elective course to ensure that the elective course is appropriate for the student's program of study.

Students may also enroll in an independent study with their thesis advisor. However, no more than 3 credit hours can be obtained from Independent Study. The credits earned as part of the independent study will be counted as an elective course. Graduate students are eligible to enroll in an Independent Study if (1) they are not on academic probation, (2) they have a cumulative GPA ≥ 3.5), (3) they have received permission from the Chair of the Department's Graduate Studies Committee, and (4) they have received permission from the Chair of the Department. As per Academic Regulations, before a student registers for an independent study, 'the student and the faculty member must agree upon and document the title, objective, scope, credit value, and method of evaluation for the independent study. The instructor must notify the

Chair of the Graduate Studies Committee of the agreement'.

If a student wishes to take a required course out of sequence, they may take a course of the same name within the consortium providing (1) the content in the consortium course and the AU required course are similar, (2) the course offered through the consortium is a graduate-level course, and (3) the student has obtained permission from the Chair of the Department's Graduate Studies Committee. Should a course be taken through the consortium, it is the responsibility of the student to make sure all necessary paperwork regarding the transfer of credits and/or grades is completed.

Courses must be chosen with the advice of the Graduate Studies Committee chair. (The thesis committee chair later assumes this role.) Graduate students must earn a grade of C or better to receive credit for any course. **Each student must maintain a cumulative grade point average of 3.0 on a 4.0 scale to remain in good academic standing within the program.** A student is making Satisfactory Academic Progress if they are in good academic standing, meet on-time the defined milestones in the program of study, and receive credit in at least 2/3 of the courses they have taken.

If the student's GPA falls below a 3.0 or if a student does not receive credit in at least 2/3 of the courses they attempt, the Registrar will place the student on academic probation for the following semester (full-time students). Part time students are placed on academic probation for either the time it takes them to attempt 9 credits or 3 semesters (whichever is shorter). Once the probationary period is over, if the student does not bring up their GPA or successfully complete the appropriate number of courses, they will be permanently dismissed from the University by the Registrar.

Full-time graduate students are expected to enroll in 9 credit hours each semester. Part-time students must enroll in 6 credit hours per semester. Merit based financial aid (teaching and research study grants and assistantships) requires full time status. Master's students are permitted only one semester in which they can take less than 9 credit hours and still retain full time status. This is typically the student's fourth (last) semester. During this time the student must be either taking their comprehensive exam or be registered for at least one credit of thesis research. Regardless of whether the students are full- or part-time, they are expected to complete all degree requirements within 6 years of the date of first enrollment in the program.

Most "half time or greater" graduate students in a degree program who are U.S. citizens are eligible for need-based financial aid (primarily loans). For this purpose, 6 credit hours is considered half time. Non-degree students are not eligible for either merit based or U.S. government need based financial aid.

Students admitted to a degree program on a provisional basis are not eligible for merit based financial aid. Provisional status is usually assessed due to an undergraduate grade point average below 3.0. Provisional status is removed if a grade point average of 3.0 or better is achieved for the first nine credit hours of graduate coursework completed at American University. If a provisionally admitted student does not achieve a graduate cumulative GPA of 3.0 or better after completing 9 credit hours, the student will be academically dismissed.

Thesis Research

It is important to begin planning for thesis research as early as possible. Students should decide on a thesis advisor by the end of the first semester and have their project in mind by the end of the second semester. Graduate students are encouraged to explore potential research directions with several appropriate biology faculty while applying for admission and during their first semester. If a good match can be found, then that faculty member should begin to serve as the student's research supervisor, and move towards a commitment to serve as the future thesis supervisor and thesis committee chair. (The student must still check their course selections with the Graduate Studies Chair.) If a student's area of research interest is not well represented in the department, then they should secure a commitment from a biology faculty member to serve as the future head of their thesis committee, obtain permission from the department chair, and search for a research supervisor outside the department. There are a number of scientists in other departments and at nearby institutions who are affiliate or adjunct professors in the department (http://www.american.edu/cas/biology/faculty.cfm), and it is also possible to have someone outside the department for a thesis committee member.

After identifying a prospective research supervisor, students should begin to work with their supervisor towards presentation of a thesis proposal. This usually entails reading the literature, discussions with the advisor, and preliminary experimental or field work to learn techniques and assess the feasibility of research strategies. Credit for this work can be obtained via Independent Study Project in Biology (BIO-690), Master's Thesis Research (BIO-797:MS), or Biology Literature Research (BIO-790:MA). During this time students should identify prospective thesis committee members, and establish informal advisory relationships with them, in order to receive adequate advice on their projects. Then, as early in their program as possible, the maturing project should be formalized as a thesis proposal and the advisory relationships should then take the form of a thesis committee.

Students complete 6ch of thesis credits (BIO-797). These course credits are graded as Satisfactory Progress (SP) or Unsatisfactory Progress (UP). These grades are given the semester in which the student is enrolled in the course and they are not used in calculating the GPA. These grades are not changed after the thesis defense nor can they be retaken to change the grade.

Thesis Committee Composition

The thesis committee serves as the advisory board for the student. It is comprised of Ph.D. level scientists with expertise pertaining to the area of the student's Master's project. Students have the right and obligation to frequent and effective communication with their thesis committee and especially with their research supervisor. Each student **must meet with their committee at least twice** during the course of their graduate study: at the oral presentation of the thesis proposal and at the oral defense of the thesis. These are formal meetings of the entire committee. Informal meetings may be held at any time, as determined by the student and/or committee members.

MS Students

The thesis committee for MS students consists of the research supervisor and two other

Ph.D. scientists. **Two of the three committee members (including the chair of the thesis committee) must be faculty members of the Department of Biology or affiliate faculty (one may be an adjunct or research faculty)**. This guarantees the department a majority representation and allows **the committee chair (who must be a full-time departmental faculty member or affiliate)** to send the completed thesis forward to the Department Chair and to the College of Arts and Sciences. One committee member may be an unaffiliated faculty member from another AU department or a faculty member from another institution, in order to provide expertise in an area not represented on the Biology faculty. Once established, the committee membership should not commonly be changed. Students are permitted and encouraged to establish and maintain additional informal advisory relationships with scientists in their field, regardless of institutional affiliation.

MA Students

Because the M.A. in Biology is a non-thesis degree, only two faculty members are required to serve on this committee. However, the student may ask a third Ph.D. scientist to be on their MA committee, if that individual can provide expertise relating to their topic. **Both committee members must be faculty members (one may be an adjunct or research faculty) in the Department of Biology.** The Biology Department has found that academically competent advice and broad support is important to success in this type of literature review.

Thesis Proposal

Both MS and MA students write a proposal in which they detail the project they will complete for their Master's degree. In either case, the main purposes of the thesis proposal are:

1. To allow the thesis committee to evaluate the student's understanding of the goals and methods of their research project

2. To help the student define and focus the project's specific aims and to develop a realistic perspective on the proposed schedule so that results will be obtained in a timely manner

3. To demonstrate preliminary work (literature research, methods, and technical skills), which will later be incorporated into the complete thesis

4. To provide the forum in which the thesis-related component of the comprehensive examination can be completed

Given the functions of the proposal defense, it is to the student's advantage to prepare and defend their proposal before they have completed the majority of their research. ***Students must fill out a form and submit it to the Biology Department office two weeks before the thesis proposal presentation. They must also submit copies of the written proposal to their committee at this time.***

The format for the thesis proposal is as follows:

1. Introduction: A comprehensive background literature search leading to a description of the hypotheses or questions to be addressed in the project; the rationale and

significance of the proposed work; the basic conceptual design of the project and its methodology. If applicable, reasons for selecting the proposed methods rather than alternative ones should be provided. The introduction can serve as Chapter 1: Literature Review of your thesis.

2. Materials and Methods: A description and justification of the organisms to be studied, experimental or observational methods to be used, and statistical or descriptive methods for data analysis.

3. Expected and/or Preliminary Results: Categories of expected and alternative possible results and interpretation of their meaning in terms of the hypotheses and questions raised in the Introduction. Classes of results that will fail to address the hypotheses or questions should be noted. Realistic knowledge of the principles operating in the system under study and the limits of the methods used should be demonstrated. Possible technical or conceptual pitfalls in the proposed work should be provided in case the results are unexpected.

4. Literature cited: A list of the literature cited in the proposal in alphabetical order of the first author's last name. Follow the guidelines in "A Manual for Writers of Term Papers, Theses and Dissertations" (by K.L. Turabian, 5th edition, University of Chicago Press, Chicago, Illinois, 1987), and the supplementary rules of the "The American University Guide to Preparation of Theses and Dissertations",

The thesis proposal should be written by the student with the research supervisor's assistance and direction. It is a vehicle for evaluating the student's ability to work independently. Students should dedicate themselves to mastering the literature in their field while preparing the proposal. The main objectives of the proposed work and why they are significant in the field of scientific research should be obvious and clearly presented. It is also important to carefully describe the methods to be used. Preliminary data should be included. The length of the proposal should be discussed with the committee, however most are at least 4000 words. In addition, there should be a complete bibliography.

Students should follow the principles of respect and courtesy in maintaining good communication with thesis committee members during the preparation of the proposal. The committee members should have periodic access to early drafts or informal oral progress reports as they desire, however, the bulk of the work of editing and revision should fall on the student and their advisor.

A complete, well edited, grammatically polished, and typographically correct version of the proposal should be made available to the committee members two weeks prior to oral presentation. Once the finalized version has been sent to the committee, the student is not to make any sustentative changes to the body of the proposal until after the proposal presentation. The oral presentation should include a 20-30 minute presentation to the thesis committee. The rationale and objectives of the project should be clearly stated, the methods should be described in detail, and preliminary data should be presented. A discussion period will follow in which the

committee may make suggestions about the research or ask questions on any aspect of the project, the methods, the design, or background literature. Revisions are usually necessary to incorporate suggestions and address concerns of the committee after the oral presentation. The proposal should be submitted and presented in time to be revised and accepted by the thesis committee and departmental chair at least one semester prior to the oral thesis defense.

In addition, the proposal defense also serves at the time at which each graduate student will complete the thesis component of their comprehensive examination (see below for details). Both MS and MA students will complete this comprehensive exam in this manner (see section III under the Comprehensive Exam Format).

Comprehensive Exam Format

The following format of the comprehensive exam has been adopted for students in the Biology M.S. or M.A. programs. The comprehensive exam will consist of two sections. The first section is a written exam that will test your knowledge of fundamental topics in Biology. The second section will test your knowledge of topics related to your research project, and will be a subcomponent of your thesis proposal defense. As such, it will contain both written and oral components. The two sections are outlined in more detail below.

Section I: Fundamental Topics in Biology

Students will be required to answer one question (of at least 2 provided) from each of the following four topics: Cellular Biology, Classical and Molecular Genetics, Evolution, and Ecology. These topics correspond roughly with the material in Units 2&4, Unit 3, Unit 5, and Unit 9, respectively, in the introductory biology textbook *Biological Science*, 4th Edition, by Scott Freeman (Prentice Hall). The Freeman textbook should be used as a general guide to the material that will be included in the exam. However, the questions on the exam often require more than rote memorization of this basic material. You will need to be able to apply your knowledge to novel situations, such as in proposing an experiment to test a hypothesis, or in the interpretation of experimental results. Two faculty members will write and grade questions for an individual topic. Answers that receive passing grades from both graders will be passed; answers that receive failing grades from both graders will be failed. Answers that receive one passing grade and one failing grade will be graded by a third (tie-breaking) faculty member, whose grade will determine the final grade for that question. In order to pass the exam, questions in three of the four topic areas must receive passing grades. Students who fail two or three topics need only retake the topics that they fail, and are required to pass a cumulative total of three topics. For example, if a student fails two topics on the first try (and passes the other two), then that student needs to pass at least one of the two topics on their second attempt. Students are normally only given two attempts to pass the comprehensive exams (see "the number of times the comprehensive exams can be taken" below for details). If you have any questions regarding the content, format, or strategy for studying for Section I of the comprehensive exams, please contact a member of the graduate studies committee (Fong, Kaplan, Krogen or Zeller). The exams are generally offered twice a year, once at the end of summer before the beginning of the Fall semester, and once in January before the beginning of the Spring semester. Note that because the exams are only offered twice a year, you must allow enough time to pass the comprehensive exams at least once semester before defending your thesis (see p. 3).

Section II: Thesis Proposal and Proposal Defense Questions for Comprehensives

Prior to the proposal defense, the thesis committee will come up a list of 3 – 4 specific questions that have to be addressed within the thesis proposal. At the thesis proposal defense/presentation, the student will give a 20-30 minute professional oral presentation (i.e., using PowerPoint, etc.) about the proposal to their thesis committee. After the presentation, the committee will ask questions pertaining to the presentation (i.e., clarification of methods, what has been done so far, etc.) In addition, the committee will also ask questions testing the student's knowledge of the background and concepts pertaining to the thesis project. This second part comprises the second section of your comprehensive exams.

In particular, students are expected to show competency in the following areas:

- Background research underlying the thesis project.
- Relation of their project to other published works and how their project fits into the literature.
- Comparison with other species and the general applicability of their data.
- Relevancy of their work.
- Ability to apply their knowledge of background research and expected results.

Students are encouraged to speak with individual members of their committee prior to the thesis proposal presentation to identify areas in which they can focus their studying. At the end of this session, the committee will decide (a) if the thesis proposal is acceptable, and (b) if the student has passed section two of the comprehensive exam. These are two separate decisions. In other words, it is possible for the proposal to be accepted, while failing section two of the comprehensive exam, or vice-versa.

The number of times the comprehensive exams can be taken

If a student fails Section I (Fundamental Topics) or Section II (Proposal Defense) of the comprehensive exam, their file is re-evaluated by the department's Graduate Studies Committee to determine if they will be allowed to retake the failed section. If the student is retaking section one (written section) they must wait until the next scheduled comprehensive exam session to retake the exam. If the student is retaking section two (thesis-related questions), they should schedule a second meeting with their committee 2-4 weeks after their original proposal defense in which to retake this section of the exam. At noted above, students are allowed to retake a failed comprehensive exam only once.

Thesis Defense

Once the research project is finished (MS), or all the relevant literature has been read and reviewed (MA), the student must write the final thesis under the supervision of their research supervisor. Again, the thesis committee members should have periodic access to early drafts or informal oral progress reports as they so desire, but the bulk of the work of editing and revision should fall on the student and their advisor. The College of Arts and Science guidelines must be followed in preparing the written thesis. A complete, well edited, typographically correct, and grammatically polished version of the thesis should be provided to the thesis committee members ***two weeks before the date of the oral defense!!!!*** Once the final document has been given to the committee, students *should not make any changes* to the body of the document until after the

presentation has been made. A copy must be made available to the public in the Biology Department office before the announcement of the oral defense can be posted. ***Notice of the time, date, and location of the oral defense must be posted one week before the date*** of the oral defense in both the Biology Department and the College (Dean's office).

The thesis defense is open to the public, and involves a 30-minute presentation by the student followed by a discussion period in which the committee members and the public may ask questions on the content of the thesis or on background literature. Following the defense, the committee meets privately to assess the defense. Usually, additional revision of the written thesis is necessary to satisfy the committee. Once approved by the committee and the departmental chair, the thesis (MS) is submitted to the College of Arts and Sciences. M.A. literature research papers are not submitted to the College of Arts and Sciences, but M.A. students should otherwise follow a similar program in obtaining approval of their paper and in orally presenting it to the public.

The Dean's Office reviews each MS thesis, providing editorial comments and correcting formatting errors. Each MS thesis should be turned into the Dean's Office for review for formatting approximately 2-4 weeks before the end of the semester (last day of classes).

On the last day of classes, the complete, defended MS thesis (with all signatures) should be turned in to the Registrar. At this time, all other requirements for the degree should also have been completed, including all courses completed and grades turned in, comprehensive exams have been successfully passed, the student has successfully defended, and the application for graduation has been completed.

Students will not be permitted to graduate until all requirements, including oral presentation and defense of their Master's work, have been successfully completed.

Financial Aid

Recommendations for merit based financial aid in the form of Assistantships are made by the Biology Department Graduate Studies Committee. These consist of a $9000 stipend and tuition remission with a required supervised work component of 20 hours per week per semester. Graduate students may also find additional part time hours but the limit is a total of 25 part-time hours per week per semester. Several criteria are considered: prior evidence of academic excellence with either a 3.2 GPA minimum or a cumulative GRE score of 1800 minimum; congruence of scholarly areas of interest with available faculty; and potential for excellence in teaching. An important goal in allocation of financial aid is enhancement of scholarly activity conducted within the department wherever possible. Most of the part time hourly wages involve teaching the laboratory sections of the undergraduate Biology courses. This option is essential for the department but it is also designed to provide broad training for students who may go on to various combinations of additional study in advance degree programs, teaching, or commercially oriented careers in biological research***. All graduate students should fill out a FAFSA (Federal Financial Aid) form each January and request part time hours.***

Carefully read the list of American University funds in the catalogue under the Tuition,

Expenses, and Financial Aid Chapter. Some of the funds which graduate students are eligible include the Lura Bradfield Foundation Scholarship, Theodore Reid Scholarship, and the Vollmer Scholarships. Specific Graduate Awards include the Special Opportunities, Hall of Nations, Massey, and United Methodist. ***Graduate students are strongly encouraged to apply for the College of Arts and Sciences Mellon Fund for research.*** These funds are usually for $1000 and can be used for research supplies and travel. Each year the College of Arts and Science also conducts a Student Research Conference (usually in February or March). This is an excellent opportunity for graduate students to display their research in a poster or make a presentation to the members of the University community.

In addition to providing each graduate student with $500 for supplies to begin their research, the Department of Biology funds Biology Graduate Research Awards that can be used for either research materials or stipend support. Research Awards are competitive and deadlines for proposal submissions are announced in advance. Proposals should be well-written and include (1) a brief (1-3pg) summary of the research project (introduction, purpose statement, methods, preliminary data, if possible), (2) an itemized budget indicating how funds will be used, if awarded, (3) a letter of support from the research supervisor, and (4) a current resume. The maximum amount a student can receive through this award is $3000 ($2000 maximum for stipend and $1000 maximum for supplies). The maximum amount may be awarded in response to one proposal (one award) or in response to more than one proposal, but in no case does the maximum amount awarded exceed $3000. All proposals are reviewed by the Department's Graduate Studies Committee and awards are given based on the scientific merit of the proposal. An extra $100 award is given to the student with the best written proposal.

Students should note that although there are many opportunities for support, the department cannot be responsible for funding continuing matriculation in those situations where a student may decide to stay longer than the typical four semesters.

Graduate Assistantship Duties

Students with **graduate assistantships** receive a stipend and up to 9 credit hours of tuition remission per semester, without a service requirement. Students may also choose to teach 20 hours per week during the 15-week term. Students are assigned to teach specific laboratory courses for these additional part time wages. Duties related to the courses include preparing and delivering laboratory introductory lectures, laboratory supervision and preparation, and cleanup, holding of regularly scheduled office hours, laboratory report and other grading, and general assistance to the professor(s) of the course. They should make themselves available for additional general assistance to the department, but should communicate adequately to avoid schedules in excess of the 20 hours per week required on average. Specific expectations should be clearly communicated by the professor of the course or by the director of laboratories. Written evaluations are provided at the end of each term, verbal feedback should be provided by the professor and the laboratory director throughout the term.

There are also part-time funds available for stockroom maintenance, general lab preparation, aquarium maintenance, and web page updates. Faculty who teach the General Education courses can receive GEFAP funds to hire teaching assistants for a maximum of 60 hours

per semester. Graduate students may work up to 25 hours per week for the University.

Graduate Student Life: Resources and Activities

American University has many resources for all students including those in the graduate programs and they are as follows:

Off Campus Housing Center	ext 2669
Student Health Center	ext 3380
Writing Center	ext 3911
Computer Centers	
Anderson Hall	ext 2561
Hurst Hall	
Office of Information Technology	ext 2270
Help Desk	ext 2550
University Shuttle Bus System	ext 3111
Kay Spiritual Life Center	ext 3320
University Library	ext 3200

The College of Arts and Sciences sponsors a Student Research conference every Spring. Students are encouraged to participate and present their research results in formal verbal and poster presentations.

The College has a strong Graduate Student governing body called the Graduate Student Counsel Association, and Biology selects two graduate students to represent the Department at the monthly meetings. It is the responsibility of the representatives to attend all meetings and provide information to the graduate students in the department. The representatives secure the graduate fees (around $300-$500), which are allotted to Biology. Graduate students within the department decide how to use the fees.

Timetable and Program of Study for Full Time Students

Individual graduate students may proceed towards completion of their degree requirements at varying rates, however, the most successful timetable is provided below to assist students in making informed decisions about when to begin their thesis research, when to take comprehensive exams, etc.

Year 1			Year 2	
1st semester	**2nd semester**	**summer**	**3rd semester**	**4th semester**
• 9 ch • Form committee • Finalize research topic	• 9 ch • Write proposal • Defend proposal • Complete comprehensive exam • Apply for Helmlinge Award	Research!	• 9 ch • Comprehensive exam • Analyze data • Begin writing thesis	• 3 ch • Continue and finalize written thesis • Thesis Defense

ch = credit hour

Please note:

- Most students will finish during the summer of their second year.
- Students receiving departmental support must be full-time (i.e., enrolled in 9 ch per semester). Only one semester in which the student is enrolled in less than 9 credit hours is permitted. At the beginning of the semester in which a student takes less than 9 credit hours, they must complete an "in lieu of" form in order to maintain full time status. This form can be found in the Department office.
- It is possible to transfer credits from a non-consortium university and apply these to the elective portion of the Master's course requirements. For transfer a courses must meet the following conditions:
    - It must be a graduate level course, related to the student's thesis project.The course cannot have been applied to a previous degree (e.g. BA, BS, etc.).
    - They must have received a grade of B or better.
    - A transcript and syllabus of the course must be provided Chair of the Graduate Studies Committee.
    - There is a limit of 6 credit hours for transferred courses.
- Students who enter the Master's programs after being non-degree students at AU or after being enrolled in a post-baccalaureate graduate certificate program at AU, may transfer up to 12 credit hours towards the MS/MA (the above conditions apply). These courses are selected at the time of application to the program.
- Support can only be awarded at or before the student's first semester in the program.
- Students may receive **departmental support for four semesters** only. Students who do not receive Departmental support or who fail to complete their degree requirements during this two year period are responsible for obtaining alternative financial assistance.