Biology Handbook

For

M.S. Students

(2006 – 2007)

Updated: April 10, 2006
# Table of Contents

Table of Contents.................................................................................................................. 1

- Biology Graduate Committee and the Graduate Program Director ........................................ 2
  - Office of Graduate Admissions & Records ........................................................................ 2
  - General Information ........................................................................................................... 2
  - Degree Requirements ..................................................................................................... 2
  - Transfer of Courses and Credits ...................................................................................... 3
  - Progress Reports ............................................................................................................. 3
  - Academic Advisory Committee (AAC) ........................................................................... 3
  - Biology Seminars ............................................................................................................ 3
  - Program Fees and Financial Aid Waiver .......................................................................... 3
  - Academic Average for Graduate Students ....................................................................... 4
    - Incompletes .................................................................................................................... 4
  - Academic Probation ........................................................................................................ 4
  - Academic Dismissal ......................................................................................................... 4
  - Statute of Limitations Policy ............................................................................................ 5
  - Leave of Absence Policy .................................................................................................. 5
  - Satisfactory or Reasonable Progress ............................................................................... 5
  - Student Union ................................................................................................................ 5
  - The MS in Biology ........................................................................................................... 7
  - The MS in Biotechnology and Biomedical Science .......................................................... 7
  - Other Information for all MS Degree Students ................................................................. 9
  - Oral Examination (Thesis Defense) .................................................................................. 9
  - Transfer from the MS to PhD Program in the Biology Department .................................. 9
  - The Graduate Certificate in Biotechnology ...................................................................... 10
    - Graduation .................................................................................................................... 10
    - Submission Deadlines .................................................................................................. 10
    - Submission of Your Thesis ........................................................................................... 10
    - Financial Information .................................................................................................... 10
    - Assistantships ............................................................................................................. 10
    - Stipends and Tuition Waivers ....................................................................................... 11
    - Responsibilities and Periods of Appointment ............................................................... 13
      - Eligibility ...................................................................................................................... 13
      - Applications ............................................................................................................... 13
      - Financial Aid .............................................................................................................. 13
    - Research and Travel Support ......................................................................................... 13
    - Graduate Student Assembly Grants for Research Expenses ....................................... 14
    - The Herbert Lipke Memorial Endowment Fund for Travel Expenses .......................... 14
    - Graduate Student Assembly Grants for Travel Expenses .............................................. 14
    - University Facilities and Services ................................................................................ 15
      - Forms ......................................................................................................................... 15
Please note: This handbook does not replace, change, add, modify or supercede any information or requirements found in the university Graduate Bulletin. The Graduate Bulletin is the official document for all procedures and responsibilities of all graduate students at UMB. There are copies of the Graduate Bulletin in the Biology Office, at other places around campus (i.e., the Admissions Office in the Campus Center) and online at: https://catalog.umb.edu. Note that your requirements for graduation are those that are in existence at the time of your matriculation into the department (the so-called “grandfather clause”).

For additional information or questions, graduate students should contact:
- The Biology Graduate Program Director (Dr. Greg Beck, 617-287-6619, greg.beck@umb.edu)
- The Office of Graduate Admissions and Records (Campus Center, UL, rm. 320, 617-287-6400)
- The Office of Graduate Studies (Quinn Administration Building, 3rd floor, rm. 069, 617-287-5700)
- The Biology Office (Wheatley Building, 3rd floor, rm. 021, 617-287-6600)
- The Biology Department website (http://www.bio.umb.edu)

**Biology Graduate Committee and the Graduate Program Director** The Biology Department has a Graduate Committee composed of the Graduate Program Director (Dr. Greg Beck), Biology faculty members (at the present time: Drs. R. Kesseli, J. Ebersole, A. Colon-Carmona, A. Pollack, J. Dukes, M. Shiaris, and K. Campbell), and a graduate student member elected annually by the graduate students [at the present time, Stephanie Wood (stephanie.wood@umb.edu)]. The graduate student member is your direct representative to graduate committee decision-making.

The responsibility of the Graduate Committee is to oversee graduate student recruitment, to evaluate student applications and make admission decisions, to oversee advising of graduate students, and to monitor student progress. The Graduate Program Director (GPD) also reports to the Office of Graduate Studies on enrollment, recruiting and other administrative matters, certifies and completes student thesis and dissertations, graduation applications, and, with the Department Chairperson, assigns graduate teaching assistantships.

**The Office of Graduate Admissions and Records** The Office of Graduate Admissions and Records is responsible for the following:
- Graduate Admissions
- Graduate Registration
- Graduate Transcripts
- Graduation Certification for Graduate Students
- Enrollment Certification
- Name/Address Changes

The office of Graduate Admissions and Records is located on the UL of the Campus Center (room 320) and is open Mon. & Wed. 8:30 - 6:00; Tues. & Thurs. 8:30 - 5:00; Fri. 10:00 - 4:00. The main telephone number is 617-287-6400. If you have any question about university requirements, please stop by their office, e-mail (bos.gadm@umb.edu) or call.
General Information

Degree Requirements
You can find all of the requirements for both the PhD and MS degrees in the Graduate Bulletin. There are copies of the Graduate Bulletin in the Biology Office and other places around campus (i.e. Campus Center). You can also find the Bulletin online at: http://catalog.umb.edu. As stated above, the Graduate Bulletin is the official document for all procedures and responsibilities of graduate students at UMB.

Transfer of Courses and Credits
In accordance with University policy, only six (6) credits taken as a non-degree student may subsequently be transferred into a student’s degree program (these are courses taken at UMB or from an acceptable academic institution). If you took courses during the summer or winter session immediately preceding your matriculation date that would result in you having more than six (6) such credits, they can be transferred in as well. For any transfer credits you will need the approval of your academic advisory committee, the Biology GPD, and the Graduate Dean. A copy of this form is found in the back of this handbook on page 18.

The Biology Department allows you to apply one undergraduate course (up to 4 credits) at the 300 level towards the credits you need to graduate. This is contingent upon approval of your Academic Advisory Committee and the understanding of the course instructor that the course is being taken at the graduate level.

Progress Reports
You and your mentor (academic advisor) will provide a yearly progress report (due by June 15) to the GPD and the Biology Graduate Committee. The GPD will e-mail all students in the Spring for this information. A copy of this form is found in the back of this handbook on page 19.

Academic Advisory Committee (AAC)
Upon admission, you will have already chosen a faculty mentor’s laboratory to work in. Within six months, you and your academic advisor will choose an Academic Advisory Committee (AAC) and will submit this proposed committee to the Graduate Committee and the Biology GPD for approval. The AAC will comprise your academic advisor and two additional members (one member can be from outside the department) in your area of research interest. You, in consultation with your academic advisor and AAC, will plan an appropriate course of study. During your graduate study, the AAC will monitor your progress. Your academic advisor shall be a full-time member of the faculty of the Biology Department. You can change your academic advisor or rearrange your AAC upon approval of the GPD and the graduate committee. A copy of this form is found in the back of this handbook on page 20.

Biology Seminars
The Biology Seminar (every Friday afternoon at 2:30 during the Fall and Spring semesters) is a valuable avenue for establishing a common biological ground among the members of the Biology Department. The scope of Biology is broad and the interests in our Department are also diverse. The seminar is therefore an important experience for graduate students, and attendance is mandatory.
Program Fee and Financial Aid Waiver
You are required to maintain continuous registration until the degree that you are seeking has been formally awarded. If you do not register for course or thesis credits during any semester, you must maintain continuous registration by paying a program fee ($175 per semester) to the university at the One Stop Student Center. It must be paid by the end of the Add/Drop period. (Note: Payment of the program fee does not extend the time limit for completion of the degree.) Any questions regarding the Program Fee should go through the One Stop Student Center. A copy of this form is found in the back of this handbook on page 21. This is a three-page carbon-copy form so please get an original from the Biology Office.

If you are required to pay the program fee and do not do so by the last day of the add/drop period you will be subject to administrative withdrawal from the University. If you later seek readmission or apply for graduation, you must pay all accumulated program fees, as well as a $25.00 readmission fee.

A Graduate Student Status form should be submitted to the One Stop Student Center along with the Program Fee form if you have any outstanding student loans. If you do not let your student loan provider know that you are still registered (even though you are paying the Program Fee) they may ask you to start paying back your student loans immediately even though you have not yet graduated. A copy of this form is found in the back of this handbook on page 22.

IMPORTANT: International students should be aware that your active visa is contingent on you being a full-time student at the University. After completing your course work and having moved on to Program Fee status, you must ask the GPD in the department to inform the Graduate Office that you are full-time, so that you don’t come up on an Alert List as not being full-time, which will result in your visa being terminated. Additionally, the office of International Student Services asks that “in order to keep your record updated in SEVIS, you need to document the continuity of your final work properly. Please submit a letter from your program of study to indicate your active participation, at the beginning of each semester until graduation time.” For continued updates visit: http://www.iss.umb.edu/.

Academic Average for Graduate Degrees
In the courses a student is offering to satisfy degree requirements, a minimum standard for satisfactory work is a 3.0 average. An average of less than this can result in academic probation or dismissal. If you are placed on academic probation you will not be eligible to receive a graduate assistantship.

Incompletes
After a one-year period, if a grade is not submitted by the faculty member, a Failure will be recorded, turning the grade on your transcript to an IF. After the end of this period, you must re-register for the course, pay for it again, and complete all its requirements in order to receive credit and a grade. If you have accumulated more than four INC/IF grades you will be considered not to be making satisfactory progress toward your degree and you will be placed on probation and will normally be barred from registering for additional classes until the INC/IF grades are cleared.

Academic Probation
You are placed on probation when the GPD or department chair requests such action. A memorandum explaining the reason(s) for the recommendation along with the recommended criteria which you must meet before the status is removed is forwarded to the Dean of Graduate Studies and placed into your file. Probation can be removed only by the Dean of Graduate Studies and only upon the recommendation of
the GPD or department chair. Justification for either restoration to degree-seeking status or dismissal must accompany the request.

**Academic Dismissal**
If you (in any two semesters, consecutive or otherwise) have semester averages of below 2.8, you will be subject to academic dismissal upon recommendation of the GPD to the Dean of Graduate Studies.

**Statute of Limitations Policy**
Achievement of an MS degree or a Certificate of Advanced Graduate Study signifies mastery of one’s chosen discipline. Rather than being merely a collection of courses, a graduate degree requires intense commitment to scholarship and practice within a specific period of time. Such focus and coherence is lost if the degree is not completed within a reasonable time period. Therefore, our program requires that you complete your course of study within designated time limits.

The Biology Department has established our own time limit, approved by faculty governance. If you fail to complete the MS degree program within 5 years you will be subject to dismissal. Time limits for completion are included on your grade reports, class schedules and invitations to register. In exceptional cases, the Dean of Graduate Studies may grant an extension of the time limit. In such cases, you must submit a request to the GPD with a letter of explanation accompanied by a detailed schedule for completion. A letter from the GPD concurring with the request must be submitted to the Dean of Graduate Studies with your request. *A copy of this form is found in the back of this handbook on page 23. This is a three-page carbon-copy form so please get an original from the Biology Office.*

**Leave of Absence Policy**
You may obtain a leave of absence up to a maximum of two years by filing a request that must be approved by the GPD and the Dean of Graduate Studies. A leave of absence extends the time limit by the length of the leave, but you must pay the program fee for each semester of the leave. *A copy of this form is found in the back of this handbook on page 24. This is a three-page carbon-copy form so please get an original from the Biology Office.*

**Satisfactory or Reasonable Progress**
You must make satisfactory or reasonable progress toward completion of a degree program within the University’s policy on time limits for that degree. If you are not making satisfactory or reasonable progress, you can be subject to probation and dismissal upon the recommendation of the GPD to the Dean of Graduate Studies.

**Student Union**
All graduate students are members of the UMB Graduate Student Union. In order to receive a TA, stipend, tuition and fee waivers you must belong to the union.
**The MS in Biology**

You may choose either of two options:

a. A program of study with a research-based thesis, designed to provide competence for teaching, research, or further study; or
b. A program with a library research project, designed to meet the needs of a generalist.

**Course Work Requirements**

Thirty credits are required for the MS degree in Biology. You may select courses at the 600 level or above. As part of the course work, you must take BIOL 650 (Scientific Communication, 3 credits)*.

*Note: Students have generally gained more benefit from Scientific Communication after they have developed a thesis topic (generally after your second semester).

If you choose option “a” you will have an academic advisor and your AAC, and you must enroll for at least ten credits in BIOL 699 (Thesis Research). More than 10 BIOL 699 credits may be taken; however, only 10 credits will count towards your graduation requirements.

If you choose option “b” you will have an academic advisor and your AAC, and you must enroll for at least six credits in BIOL 698 (Projects in Biology).

You must fulfill the remainder of your course work (17 credits for option “a” students, 21 credits for option “b” students) with electives acceptable to your AAC. All candidates for the MS degree (option “a” or “b”) must take an oral examination (see below).

If you choose option “a” you must submit a thesis draft; if you choose option “b” you must submit a library project draft to your AAC for approval before taking the master’s oral examination, which is not limited to the thesis topic.
The MS in Biotechnology and Biomedical Science

Course Work Requirements
Thirty credits are required for the MS degree in Biotechnology and Biomedical science. You may select courses at the 600 level or above, subject to the permission of the instructor.

You must complete the following courses:
- BIOL 650* (Scientific Communication, 3 credits) and
- BIOL 696 (Research Experimentation in Biology) (2 semesters must be taken)

*Note: Students have generally gained more benefit from Scientific Communication after they have developed a thesis topic (generally after your second semester).

You must complete at least four of the following courses:
- BIOL/PHYSIC 608 (Biophysical Instrumentation)
- BIOL 615 (Immunology)
- BIOL 626 (Molecular Genetics of Bacteria)
- BIOL 627 (Bacterial Physiology)
- BIOL 664 (Computer Analysis of DNA and Protein Sequences)
- BIOL 670 (Tissue Culture)
- BIOL 675 (Advanced Molecular Biology)
- BIOL 677 (Advanced Eukaryotic Genetics)
- BIOL 678 (Protein Chemistry and Enzymology)

You must complete an additional nine credits by taking elective courses chosen from the following list, of which two must be Biology courses.
- BIOL 602 (Plant Molecular Biology and Physiology)
- BIOL 612 (Advanced Cell Biology)
- BIOL 614 (Advanced Cell Chemistry)
- BIOL 622 (Concepts and Methods in Cytology)
- BIOL 653 (Current Literature in Biology)
- BIOL 662 (Photobiology)
- BIOL 666 (Mammalian Toxicology)
- BIOL 668 (Cellular and Molecular Endocrinology)
- BIOL 672-673 (Directed Readings)
- BIOL 685 (Biomedical Tracers)
- BIOL 692 (Advanced Physiology)
- BIOL 693 (Seminar in Neurobiology)
- BIOL 699 (Thesis Research)*
- CHEM 653 (Polymer Chemistry)
- CHEM 658 (Medicinal Chemistry)
- ECOS 611 (Applied Statistics)
- PHYSIC 603 (Nuclear Radiation Physics and Biophysics Laboratory)
- PHYSIC 604 (Cryogenics and Vacuum Technology)
- PHYSIC 609 (Physics of Medical Imaging)
- PHYSIC 610 (Topics in Medical Imaging)
*Open as an elective only to those students choosing the thesis option. May be taken for a maximum of 4 credits.
You may choose either an internship option or a thesis option (in which you will pursue a thesis research project in the laboratory of your academic advisor). Thesis students have the option of taking 4 additional research credits, as BIOL 699. This, in combination with two semesters of BIOL 696, will allow for a maximum of 10 credits toward research.

You must prepare a written report (internship option) or thesis (thesis option) on your research work and take an oral examination (thesis defense), which will not necessarily be limited to the topic of the report (see below).
Other Information for all MS Degree Students

Oral Examination (Thesis Defense)
Before you submit your final graduation materials, you must pass an oral examination that is administered by your AAC. The examination consists of two-parts. The first part is a short (40 - 45 minute) oral presentation of your research work to the Biology Department. The oral examination should not be scheduled until you and your AAC agree that you are appropriately prepared. Biology faculty, students, and friends are invited to attend. Following the presentation, a meeting between the AAC and you will be held for further questions and to discuss any final amendments, if necessary. The AAC will then meet and decide if you have satisfactorily met the requirements for the MS degree. If all AAC members cast positive votes, you shall be deemed to have passed the final oral examination. If there is one negative vote, the degree will be held up pending satisfactory resolution by you of the objections of the dissenting member of your AAC. Final program approval is represented by the signature of the GPD on the final version of your thesis. If two or more members cast negative votes, you will be informed that you have failed the examination. A copy of this form is found in the back of this handbook on page 25.

You must notify the office staff (with the date and time) at least one month before your defense so a suitable room can be found and the Office of Graduate Studies can be notified. You must submit your thesis, library research project, or internship report to your AAC at least 2 weeks before your thesis defense.

Transfer from the MS to PhD Program in the Biology Department
Occasionally, a faculty member may recommend that an MS student in their laboratory be made eligible to switch to the PhD program from the MS program. Such recommendations, made in writing, will go before the Biology Graduate Committee, which may then decide to invite the student to apply to switch programs. A copy of this form is found in the back of this handbook on page 26.

Applicants who wish to switch programs must provide the following information to the Graduate Committee:
- A statement (of a paragraph or two), describing why you want to move, your MS work so far (along with any papers published, abstracts presented, etc.) and what research you plan to pursue (one page maximum),
- A copy of your current transcript (an unofficial copy is OK as long as it is up to date),
- Signatures from your thesis committee that they approve of the move, and
- A statement from your academic advisor about their approval and your plans for the future.

When a student is given permission to advance to the PhD program the written comprehensive and oral examination must be taken after the completion of at least 18 credits of course work; and it should generally be taken by the end of four semesters or 36 credits of course work (see the Graduate Bulletin or Biology Handbook for PhD Students for more detailed information).
The Graduate Certificate in Biotechnology

Students choosing to pursue the Graduate Certificate in Biotechnology are given a sound theoretical background working in the research and development divisions of biotechnology companies or biomedical research laboratories.

To earn the certificate, you must complete 15 credits, with a grade point average of at least 3.0. Courses are chosen from the list below:

- Biol 608 (Biophysical Instrumentation)
- Biol 612 (Advanced Cell Biology)
- Biol 615 (Immunology)
- Biol 626 (Molecular Genetics of Bacteria)
- Biol 664 (DNA & Protein Sequence Analysis)
- Biol 670 (Tissue and Organ Culture)
- Biol 675 (Advanced Molecular Biology with Lab)
- Biol 676 (Advanced Molecular Biology without Lab)
- Biol 677 (Advanced Eukaryotic Genetics)
- Biol 678 (Protein Chemistry & Enzymology with Lab)
- Biol 679 (Protein Chemistry & Enzymology without Lab)

At least two of your courses must include laboratory work with biochemical or cellular techniques (Biol 670, 675 or 678 all fulfill this laboratory requirement). Studies for the certificate must be completed within four years. Part-time students may be granted an additional year to complete your studies by petitioning the Biology GPD and the Office of Graduate Studies and Research.
Graduation

To complete a Graduate degree from UMB the first step is to check to make sure that all the course requirements for the degree are being satisfied in a timely fashion and according to graduate school policy. The best time to do this is either the first semester of the final year of study, or within 15 credits of completing the degree.

If you wish to check on your progress you should obtain an unofficial copy of your transcript from the WISE system. You should review the transcript with your academic advisor. If there are gaps or inaccuracies, allow time to ensure that your transcript is correct yourself.

The following steps should be completed in the order listed (see deadlines below):
- **You and your academic advisor**: Meet with your thesis committee to ensure that your course work and research is complete and to schedule an oral examination.
- **Your academic advisor**: Inform the GPD of the results of the oral examination. The GPD will notify the Office of Graduate Records.
- **You**: Obtain the “Application for the Degree” form (M4) from the Office of Graduate Studies. Complete the form and sign. Submit the completed form to the GPD. A copy of this two-page form is found in the back of this handbook on pages 27 and 28.
- **You**: Pay a $150.00 Commencement Fee at the Bursar's Office (check only) (remember deadlines below).
- **You**: Submit the original (unbound) thesis (on bond paper) and two copies to the Office of Graduate Studies plus a money order or cashier's check (they will not accept a personal check) for $45.00 made out to the University of Massachusetts Boston. Two bound copies are for the library and the other bound copy is for the Biology Department files. Additional bound copies for yourself are $15.00 per copy, and you must provide Graduate Studies with the additional copies to be bound.

Submission Deadlines

Final version of your thesis to the Office of Graduate Studies:

- August 1 for an August degree date (Master’s Degree only)
- December 1 for a December degree date
- April 15 for a June degree date

If you are anticipating graduation in September, you may participate in the May ceremonies.

You need to follow the rules for the preparation of a thesis contained in the “Guidelines for the Preparation of Theses and Dissertations at the University of Massachusetts Boston” pamphlet available from the Office of Graduate Studies and Research.
Submission of Your Thesis

After its approval at a thesis defense, and no later than the above deadlines, the final version of the work, including a completed signatory page, is submitted to the Office of Graduate Studies. This manuscript must be clear and grammatically correct. Errors in this final version may delay the award of your degree. You should work closely with your academic advisor on issues of format and style, using the pamphlet “Guidelines for the Preparation of Theses and Dissertations at the University of Massachusetts Boston” to guide you. Your advisor should review the final copy before you submit it to the Office of Graduate Studies. Your dissertation committee certifies that your manuscript is “Approved as to style and content...,” but the Office of Graduate Studies has final authority in the acceptance of the work.

Master’s Theses - After the thesis defense, you must submit a final version to the Office of Graduate Studies for review. Although this version may be submitted on plain (as opposed to archival quality) paper, it must be a final document in all other regards.

Once the Office of Graduate Studies has reviewed the thesis, you will be notified of any necessary format changes. After these changes have been made, the following must be submitted to their office:

- The original copy of the final version, on archival paper that will go to the library;
- Two good photocopies - one for the department and one for the library;
- A completed binding request form with the appropriate fee.

Be sure that all signatures on the signatory page are in black ink and that the original copy is on archival paper. Each of the above items should be submitted in separate manila envelopes. Envelopes must be clearly marked as to their contents, along with your name, program of study, current address, telephone number and email address.

You must have at least three copies bound. The library receives two copies, one copy on the archival paper and one on regular photocopy paper. In addition to these two required library copies, and one copy for the department, you also may want to have one or more personal copies bound. Make sure to place the copies separately in manila envelopes and mark your name, address, e-mail address, program and telephone number on all copies.

The Registrar must receive all other materials required for graduation by the same deadlines.

Once the Office of Graduate Studies has accepted the final version of a thesis, it becomes the property of that office and cannot be removed by the degree candidate, a member of the faculty or staff, or other students. No further corrections can be made. The copies submitted will be bound and housed in the university library.

At present, the binding fee is $15.00 per copy. Only bank checks or money orders are acceptable and must be made payable to UMass Boston, Graduate Studies, #104161. This fee is subject to change. Binding guidelines and a sample binding request form will be found on pages 13 of the guidelines pamphlet.

When you submit a binding request for the required copies of your thesis, you also may arrange for additional bound copies for personal use. Each additional copy should be submitted in a separate, clearly marked manila envelope with your name, address, telephone number, email address and program on the front.

Financial Information
Assistantships
The University offers a limited number of graduate assistantships in teaching (TA) to qualified students. You should consider applying for assistantships. You must be a currently enrolled degree-seeking (matriculated) graduate student in good academic standing. Part-time assistants must be registered for at least six credits, and full-time assistants must be registered for at least nine course credits, or capstone/thesis/dissertation credits.

During the summer there are usually other TA positions open in our summer courses. You would be paid an additional stipend to be a TA in these courses. Information is usually available during the middle part of the Spring semester from the office staff. Please talk to your academic advisor beforehand to see if being a TA in a summer course will fit into your research responsibilities.

Stipends and Tuition Waivers
All assistantships carry stipends, tuition and fee waivers. The amount of each stipend depends upon your workload. If you are awarded at least half of the full-time stipend you are eligible for a tuition waiver. It is possible to maintain full-time status without paying tuition by paying the Program Fee (see page 4).

Responsibilities and Periods of Appointment
Full-time graduate assistants are expected to work twenty hours per week; half-time assistants work ten hours weekly. Most assistants undertake teaching responsibilities or instructional support activities. Reappointment is possible, but the University is under no obligation to reappoint any student to an assistantship.

Applications
The GPD is responsible for recommending to the Office of Graduate Studies and Research that students be awarded assistantships. Each spring the TA positions for the following academic year are posted (as per the Graduate Student Union contract) after the Dean of Graduate Studies reviews them. In addition, all the positions are e-mailed to you. Students seeking assistantships should apply as early as possible. General information about assistantships is also available from the Office of Graduate Studies and Research.

Financial Aid
Through UMB’s Office of Financial Aid Services, loans and part-time summer employment opportunities are available to degree-seeking graduate students. You are encouraged to apply early as funds are limited. Once you have applied for financial assistance, you are automatically considered for every form of currently available University administered aid for which graduate students are eligible.

Note: You have the right to apply for financial aid and must be considered fairly and equally, without regard to race, color, sex, age, religion, national origin, sexual orientation, disability, or veteran status. A complete list of your other student rights and responsibilities in connection with financial aid may be found under “Regulations, Procedures, and Degree Requirements” in the Graduate Bulletin.

Research and Travel Support
**Graduate Student Assembly Grants for Research Expenses**
The Dr. Robert W. Spayne Research Grant (for work leading to a Master's thesis) is a competitive grant awarded to assist you in defraying research expenses. Up to two grants of $1,000 (maximum) are awarded each fall and spring semester by a committee of UMB graduate students, faculty and staff. The grants are usually announced in the Spring semester. See their website ([http://www.gsa.umb.edu/programs.htm](http://www.gsa.umb.edu/programs.htm)) for information.

**The Biology Department Herbert Lipke Memorial Endowment Fund for Travel Expenses**
Members of the Lipke family, his friends, and colleagues established the Herbert Lipke Memorial Endowment Fund in 1983 to support graduate work in biology at UMB. The fund provides awards to support professional travel by biology graduate students presenting papers at scientific meetings. There is a rolling deadline for submission of travel forms. *Information and a copy of this form are found in the back of this handbook on pages 29 and 30.*

**The Graduate Student Assembly Professional Development Grants for Travel Expenses**
The GSA (Graduate Student Assembly) also has funding available [professional development grants (PDG)] to defray the cost of traveling to meetings and conducting research. Their deadline for submission of forms is usually the end of November. See their website ([http://www.gsa.umb.edu/programs.htm](http://www.gsa.umb.edu/programs.htm)) for specific information.
University Facilities and Services

The Healey Library

The university's Joseph P. Healey Library is easily accessible through the library's homepage (http://www.lib.umb.edu). You can draw upon more than 100 online indexes and databases and obtain articles from more than 26,000 electronic and print journal subscriptions.

The library homepage also provides access to its catalog of nearly 600,000 volumes, and to a Virtual Catalog that includes all UMass system libraries along with those of Brown, Northeastern, Tufts, Boston University, the Universities of New Hampshire and Connecticut, the Woods Hole Oceanographic Institution, and several public library networks. The Virtual Catalog offers online order tracking and rapid delivery. With 9 million book titles and a total of nearly 30 million volumes available at a point-and-click, it provides a collection surpassed by no individual academic library in the world. In addition to Internet searching and ordering, you may obtain a consortium-borrowing card that is also valid in these libraries.

You can obtain a library barcode for your University ID card by stopping at the circulation desk on the 2nd floor of the library. Library staff provides instruction on the use of all resources in the collection and those available online, including RefWorks, a bibliographic citation manager.

To learn more about library services, go to the reference desk on the 4th floor or contact the reference staff:

- e-mail: library.reference@umb.edu
- Phone: 617-287-5940
- 24-hour online chat: http://www.lib.umb.edu/reference

Useful Library Phone Numbers and e-mail Addresses

- Circulation Desk: 617-287-5900, (e-mail: Library.circulation@umb.edu)
- Interlibrary Loan: 617-287-5929
- Library Hours: 617-287-5900 (http://www.lib.umb.edu)
- Reference Service: 617-287-5940 (e-mail: Library.reference@umb.edu)

Laboratories

You have access to all of the university’s modern research laboratories and equipment. You can make use of our tropical greenhouses or field stations (Waltham Agricultural Station and the Grace Grossman Environmental Center on Nantucket Island), electron microscopes, DNA sequencers, tissue culture facilities, controlled-growth rooms, image processing, physics laboratories with laser and photonics facilities, distance learning technology and extensive GIS facilities, and our new CSM environmental genomic laboratories including DNA sequencing and micro-array technology. Analytical chemistry facilities comprise HPLC, GC/MS magnetic resonance spectrometers, atomic force microscopes, an array of electrochemical instrumentation for renewable energy study, and spectroscopic instrumentation for atmospheric studies.

Computing Services

Both teaching and research at UMB benefit from the extensive facilities coordinated by the university's Office of Computing Services. This office provides a variety of information technology and data communications resources to the UMB community, with network connections in every office and classroom on the campus. The campus network is fiber-optic based with ATM protocol. Multiple
transmission facilities are maintained, providing access to the UMB network and to the Internet. A central computing facility houses equipment from Data General, Dell, Compaq, Sun, and Apple. Operating systems provided in this environment include XP, Unix, Linux, Apple OS, and VMS. You have access to 15 general desktop computing labs with more than 250 Dell and Macintosh computers, seven days a week. Additional, specialized computing facilities are provided to students enrolled in specific courses of study, and for those with special needs.

Further information about computer resources is available at the computer labs on the upper level of the Healey Library, or from the Computing Services Help Desk (617-287-5220).

**Media Services**

UMB's Media Services provide a full range of audio-visual equipment, located in several media labs, and consultation, for instructional and other university-related purposes. The media labs provide access to display and mini-production audio, video, and mixed media equipment on a scheduled university-wide basis. In addition, language laboratories are available for use in conjunction with foreign language courses. The tapes used in laboratory sessions are closely correlated with classroom studies, and many are produced within the Media Center. The Center's sophisticated media production facility, located in the Lower Level of the Healey Library, is equipped with a computer-assisted video editing system and a multitrack audio studio. (617-287-5960)

The Graduate and Faculty Research Center, is especially designed for graduate students, staff and faculty. The new wireless lab, located on the 5th floor (room 00026) of the Healey Library, provides a quiet environment for writing and research. The Windows computers are equipped with word processing, spreadsheet, presentation, statistical and desktop publishing software, along with access to email and the Internet. You will be able to print posters here. (617-287-5272)

**State Archives**

The archives of the Commonwealth of Massachusetts are housed adjacent to the campus in the Massachusetts Archives and Commonwealth Museum. You can benefit greatly from this rich resource, whose research materials cover three and a half centuries.
FORMS
Application for Pre-Matriculation Waiver of the Non-Degree Transfer Credit Limit
Please return signed form to the Registrar’s Office

In accordance with University policy, only six (6) credits taken as a non-degree student at UMass Boston may subsequently be transferred into a student’s degree program. In cases where a newly admitted student wishes to take courses during the summer or winter sessions immediately preceding their matriculation date that would result in their having more than six (6) such credits, the Graduate Program Director may approve a Pre-Matriculation Waiver by signing this form, after advising the student concerning the appropriate courses to register for.

Student’s Name __________________________ Student ID # ______________________

Program _________________________________ Degree __________________________

Acceptance Date: ________________ For Matriculation in Fall / Spring (circle one) _________ (year)

A. The student listed above is applying for a pre-matriculation waiver of the non-degree transfer credit limit. Please allow the student to transfer the following courses, taken between the date of acceptance and his/her official date of matriculation (as noted above), into his/her degree program. Courses so approved will be exempt from the normal non-degree transfer credit limit.

<table>
<thead>
<tr>
<th>Dept./Subject</th>
<th>Catalog/ Course #</th>
<th>Schedule/Class #</th>
<th>Course Name</th>
<th>Units/Credits</th>
<th>Term/Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B. The student listed above also has my authorization to transfer the following courses taken as a non-degree student before his/her acceptance date into his/her degree program. (List no more than 6 credits)

<table>
<thead>
<tr>
<th>Dept./Subject</th>
<th>Catalog/ Course #</th>
<th>Schedule/Class #</th>
<th>Course Name</th>
<th>Units/Credits</th>
<th>Term/Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I certify that the student was accepted into the program on the date entered above, that the student has been duly advised by program faculty, that the courses listed on this form are acceptable and properly sequenced courses for this student’s program of study, and that they otherwise meet all University eligibility standards for transfer.

Graduate Program Director (Print Name) __________________________ Date ____________

Signature ____________________________________________________________
MEMORANDUM

FROM: Graduate Program Director
TO: Biology Graduate Students
SUBJECT: Fall Assistantships

1. NEXT YEAR ASSISTANTSHIPS. Please circle appropriate place for a Fall teaching assistantship.

• YOUR NAME: ________________________________

• I DO NOT want a teaching assistantship (TA) for next year
  • I have another source of funds: What is it (e.g. WISP, GRA, GRT, etc.)? ______
  • I am on program fees

• I DO want a teaching assistantship for next year ________?
  • Full-time: ______
  • Half-time: ______

• I am not sure at this point whether I want an assistantship next year: ________

You must take at least 9 credits to be full-time and at least 6 to be half-time.

2. PROGRESS IN COURSE OF STUDY. Please supply the following information for my records:

• Thesis or dissertation advisor: ________________________________

• Thesis or dissertation committee members: ________________________________

• Have you met with your AAC in either the Spring or Fall? •Yes •No

• Planned Date for Graduation: Semester ________ Year ______

• Did you do any noteworthy science-related accomplishments such as talks or posters, community service, research papers (published or submitted), or grants (awarded or submitted)? You can use the back of the form.

You should have an AAC by the end of your first full year of study. It is important for you to meet with your AAC early in your work to agree on a course of study (i.e., required coursework) and the nature of your laboratory or field thesis/dissertation problem. For Ph.D. students, in addition to the above, you should settle on the nature and date of your qualifying exams. It is your responsibility.

If you are planning on a JUNE graduation date, all materials including a signed thesis or dissertation must be into Graduate Studies by April 15. The December deadline is December 1.

3. If your address has changed in the last year, please provide new address and phone number:
Notification of Proposed Academic Advisory Committee (AAC)

Student's Name: 

ID #: 

<table>
<thead>
<tr>
<th>Members of your AAC</th>
<th>Dept/Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chair (your academic advisor):</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Member:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Member:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Member:</strong></td>
<td></td>
</tr>
</tbody>
</table>

Approved by Graduate Program Director __________________________ Date ______

(signature)
UNIVERSITY OF MASSACHUSETTS BOSTON
PROGRAM FEE FORM

Each degree-seeking graduate student is required to maintain continuous registration until the degree that the student is seeking has been formally awarded. If a graduate student does not register for course, thesis, or dissertation credits during any semester, the student must pay a program fee to maintain continuous registration. Payment of the program fee does not extend the time limit for completion of the degree. This form, signed by the graduate program director, and the $175.00 payment must be submitted together. PLEASE DO NOT SUBMIT FORM AND FEE SEPARATELY.

$175.00 FEE PER SEMESTER AND $50.00 LATE FEE IF TURNED IN AFTER THE LAST DAY OF THE REGISTRATION PERIOD.

NAME: LAST FIRST M.I. DATE

SOCIAL SECURITY NUMBER PROGRAM

Please check the semester/year for which you are paying and the reason for non-enrollment during that semester.

FALL SPRING

YR. YR.

REASON:

____ Research ______ Comp Exam

____ Other (please specify) ________________________________

Please indicate the month/year when you expect to resume enrollment or complete your degree requirements ________________

MONTH/YEAR

Graduate Program Director’s Signature: ____________________________

Send check or money order by the last day of the registration period for the semester in which you are paying to: University of Massachusetts Boston Registrar’s Office 100 Morrissey Blvd. Boston, MA 02125-3393
To: Office of Graduate Registrar

From: Department of Biology
Re: GRADUATE STUDENT STATUS

This is to verify that the Biology Graduate Student named below is a full-time student during the semester indicated and is on program fee. He/She continues to conduct research in the field and/or lab while working on his/her MS thesis or PhD dissertation.

Please notify the appropriate loan institution so their student loans may be deferred this semester.

NAME: ____________________________________________

DATE: __________________________

STUDENT ID: _________________________

FALL__________ SPRING ___________

Thank you.

___________________________________________
Gregory Beck
Biology Graduate Program Director
STATUTE OF LIMITATIONS EXTENSION FORM

Student Name: ________________________________

Student Number: ______________________________

Program: ________________________________

Student: Please state reasons for requesting an extension, academic plan and date of degree completion.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

I approve the above plan to extend this student’s statute of limitations to ____________

Graduate Program Director Approval Signature: ________________________________

Date: ________________________________

Registrar’s Approval: ________________________________

Date: ________________________________
UNIVERSITY OF MASSACHUSETTS BOSTON

LEAVE OF ABSENCE REQUEST FORM

If you need to take time off from your graduate program, this form must be filled out and approved by your Graduate Program Director. If a leave of absence is approved, the time limit for completing the degree will be extended accordingly. Please keep in mind that the $175.00 program fee is still required for each semester you are on your leave of absence. **There will be an additional $50.00 late fee if the form and fee are not submitted by the end of the registration period.**

Social Security Number ____________________________________________

Name ___________________________________________________________

Graduate Program ________________________________________________

Semesters to be on Leave of Absence: Fall ______ Spring ______ Semester to Return ______

yr. yr. yr.

Please state reason you are requesting a leave of absence:

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

Student Signature: ____________________________ Date ________________

Leave of Absence request approved ______ request denied ______ (GPD, please check one)

Graduate Program Director Signature ____________________________ Date ________________

Registrar’s Office Signature ____________________________ Date ________________

PLEASE DO NOT SUBMIT THE FORM AND FEE SEPARATELY. THEY MUST BE SUBMITTED TOGETHER.
# Results of Thesis Defense

**Student's Name & ID #:** ____________________________

**Report on the results of the thesis defense; include the committee’s vote.**

**Date of Thesis Defense:**

**Action by the Committee:** _______Approve _______Disapprove

<table>
<thead>
<tr>
<th>Final Thesis Committee</th>
<th>Dept/Affiliation</th>
<th>Vote</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chair:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Member:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Member:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Member:</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Approved by Graduate Program Director  ___________________________________________  Date  _____  (signature)

Received by Dean of Graduate Studies  ___________________________________________  Date  _____  (signature)
Transfer from the MS to PhD Program in the Biology Department

Student's Name & ID #: __________________________________________________________

Please provide the following information to the Graduate Committee:

1) A statement (a paragraph or two), describing why you want to transfer, your MS work to date (along with any papers published, posters presented, etc.) and what research you plan to pursue (one page maximum),

2) Signatures from your thesis committee denoting their approval of the transfer.

<table>
<thead>
<tr>
<th>Thesis Committee</th>
<th>Dept/Affiliation</th>
<th>Approval of move from MS to PhD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Member:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Member:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Member:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3) A statement from your academic advisor (regarding their approval and your plans for the future).

4) A copy of your current transcript (an unofficial copy is OK as long as it is up to date),
REGISTRAR'S OFFICE GRADUATE DEGREE APPLICATION

Part I: To be completed by candidate
Please type or print clearly in black ink

Name: __________________________________________
(As you wish it to be printed on your diploma. Name must be the same on file.)

Diplomas will be mailed out to the address on file.

Program: _______________________________________

Degree: (Circle one) MA MS MEd CAGS PhD EdD

Anticipated degree date: May/June 20___ August 20___ December 20___

List only graduate courses to be counted towards your degree at UMass Boston.

<table>
<thead>
<tr>
<th>DEPT/COURSE NO.</th>
<th>COURSE TITLE</th>
<th>SEM/YR TAKEN</th>
<th>CREDIT</th>
<th>GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Transfer Credit: ON AND OFF CAMPUS

<table>
<thead>
<tr>
<th>INSTITUTION</th>
<th>COURSE TITLE</th>
<th>SEM/YR TAKEN</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For courses taken at another institution an official transcript must be on file before transfer credit will be granted.

To the best of my knowledge the information given above is correct and complete.

Signature of candidate: _______________________________ Date: ____________
This completed form with the required signatures and the $150.00 commencement fee is due in the Registrar’s Office by the date indicated at: www.registrar.umb.edu/audits.html.

Part II (A-E) To be completed and signed by the Graduate Program Director (Indicate Dates)

A. Language Exam: (Indicate Language and Date) ____________________________
   Passed _________  Failed _________  Not Applicable _________

B. Capstone Requirement: (Indicate Date)
   Passed _________  Failed _________

Capstone requirement consisted of: (this will be notated on the student’s transcript)
Please circle type(s):
9. Other
__________________________

C. PhD/EdD Oral Exam: (Indicate Date) Passed _________ Failed _________ Not Applicable _________

D. Masters Thesis/Doctoral Dissertation Committee: ____________________________
   Not Applicable _________

Thesis/Dissertation and binding fee must be submitted to the Office of Graduate Studies.

E. Graduate Program Director’s Approval.

I recommend that ____________________________ be awarded ____________________________ degree/certificate in May/June 20___ August 20___ December 20___.
   The information furnished by the above named candidate has been verified from my program’s records contingent upon: (Check if Applicable)

Current Semester Grade(s) □  Comp Exam/General Master’s Exam □  Thesis/Dissertation Defense □

Capstone Requirement □  Thesis/Dissertation Binding □

Comments: ____________________________

Graduate Program Director’s Signature: ____________________________

Date: ____________________________

Make a copy of this document for your files.
Attached is the application for support from the Lipke Endowment Fund. The Fund provides support of professional travel for Biology Graduate students. In keeping with the wishes of the Lipke family, funds are awarded primarily for presenting work at scientific meetings or participating in scientific meetings.

The Herbert Lipke Memorial Endowment Fund was established in 1983 by members of the Lipke family, his friends and colleagues to support graduate work in biology at the University of Massachusetts at Boston.

Herb Lipke was a Professor of Biology at the University of Massachusetts, Boston from 1967 to 1983. An internationally known biochemist, Professor Lipke's main research was on the structure of cuticular proteins of insects. He also collaborated with scientists around the world in insect biochemistry and tropical medicine. His international research was concerned with the susceptibility of insects to insecticides. He worked on organic or natural methods of insect control to seek a better approach to the control of mosquitoes and tsetse flies in Africa and the Middle East.

Before joining the UMass faculty, Professor Lipke was a biochemist with the entomology branch of the U.S. Army Research and Development Command at Edgewood Arsenal, Maryland, in the late 1950's through the late 1960's. Before that, during World War II, he was attached to a chemical mortar battalion with the Army's Chemical Corps in North Africa and Europe.

Professor Lipke also had been a visiting scientist in the Department of Zoology at Cambridge University, England in 1975-1976. He was a Fellow at the London School of Hygiene and Tropical Medicine from 1960 to 1962. He held numerous other appointments, including fellowships with the Rockefeller Foundation, the World Health Organization and the North Atlantic Treaty Organization.

The Herbert Lipke Memorial Endowment Fund provides awards to support professional travel by graduate students. Although preference is given to students presenting papers at scientific meetings, applications for travel related to fieldwork are also entertained.
THE LIPKE MEMORIAL FUND FOR BIOLOGY GRADUATE STUDENTS

Application for Travel
September 20____ - August 20_____

Name:
Home Address:
Home phone: Campus phone: e-mail:

Thesis Advisor:
Title or approximate dissertation/thesis title:

Expected date of completion of your degree:

1) Purpose of travel (e.g., attending a meeting or fieldwork; if presenting a paper, submit an abstract):

2) Budget (itemize expenses):

3) Please explain briefly the relevance of your travel to your graduate training or professional goals.

4) Have you applied for other resources (GSA*, etc.) of funding to support this travel request?

   Yes____ No ____

   * We strongly encourage you to apply to GSA and other sources for funds in addition to the Lipke Fund.

5) Please include one or two brief supporting letters from faculty who are familiar with your work (Names of those who have agreed to provide letters):

   a)

   b)

Return your applications to the Biology Department Office at UMB