Carnegie Mellon University
DEPARTMENT OF BIOLOGICAL SCIENCES

M.S. in Computational Biology
Graduate Student Policy Handbook
www.cmu.edu/bio

M.S. in Computational Biology Resource Handbook for Graduate Students

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Introduction

The Department of Biological Sciences and the Ray and Stephanie Lane Center for Computational Biology have prepared this statement of policies and procedures to help answer questions that students may have as they enter the M.S. in Computational Biology (MSCB) program. This document specifies requirements that must be achieved in order to be a student in good standing; failure to meet any of these requirements may result in dismissal from the program.

The MSCB Steering Committee and Graduate Programs Offices provide ongoing guidance and assistance to students throughout the course of their graduate career, and any questions or concerns may be discussed with either the faculty of the MSCB Steering Committee or the Department Heads at any time. The University Graduate Student Handbook, which details university-wide policies, is available upon request from the Biological Sciences Graduate Programs Office.

University Policies & Expectations

It is the responsibility of each member of the Carnegie Mellon community to be familiar with university policies and guidelines. In addition to this departmental graduate student handbook the following resources are available to assist you in understanding community expectations:

The Word/Student Handbook: www.cmu.edu/student-affairs/theword//index.html
Academic Integrity Website: www.cmu.edu/academic-integrity
University Policies Website: www.cmu.edu/policies/
Graduate Education Website: www.cmu.edu/graduate/policies/index.html
The Carnegie Mellon Code: www.cmu.edu/student-affairs/theword/code.html

Carnegie Mellon University Statement of Assurance

Carnegie Mellon University does not discriminate in admission, employment, or administration of its programs or activities on the basis of race, color, national origin, sex, handicap or disability, age, sexual orientation, gender identity, religion, creed, ancestry, belief, veteran status, or genetic information.

Furthermore, Carnegie Mellon University does not discriminate and is required not to discriminate in violation of federal, state, or local laws or executive orders. Inquiries concerning the application of and compliance with this statement should be directed to the vice president for campus affairs, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA 15213, telephone 412-268-2056.

Obtain general information about Carnegie Mellon University by calling 412-268-2000. The Statement of Assurance can also be found on-line at: www.cmu.edu/policies/documents/SoA.html.

Program Contacts

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MSCB Steering Committee Faculty

Whom to contact for what?

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Overall Program Management, Academic Integrity Issues, Leave of
Absence Approval

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Academic Advising and Course Selection, Periodic Academic
Progress Checks, Change to P/F, Research for Credit, Graduation
Certifications, Student Life Issues, Biological Sciences Graduate
Ombudsperson, International Student Issues, Oral Communication
Skills, Alumni Networking, Professional Issues and Social Events,
Diploma Ceremony, Overall Program Management

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Internship and Job advising, OPT/CPT authorization, Career
Center and Industry Liaison, Alumni Networking, Course
Selection, Professional Issues and Social Events, Overall Program
Management

krthickman@cmu.edu

Primary Support Staff

Graduate Programs Manager
(Biological Sciences Graduate Programs Office)

Graduate Student Database Management, Pre- and Post-Admission Procedures through Graduation, Graduation Certifications, Diploma Ceremony, Orientation Coordination

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Administrative Coordinator

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Section 1. Degree Attainment

Courses and Grades

Coursework   To receive the M.S. degree, students must successfully complete these requirements:

A. Total of **at least 99 units** of coursework
B. **Average grade of B** or above (GPA = 3.0) in those 99 units
C. **Full-time course registration** (at least 36 units) for each semester in the program.
D. Successful completion of two semesters of *Professional Issues in Computational Biology* 02-602 *(see p.6)*

Coursework consists of:

A) Three Core Courses, which must be completed with an **average grade of B or above**:

- Computational Molecular Biology and Genomics 03-711
- Computational Methods for Biological Modeling and Simulation 03-712
- The third Core Course is a 12-unit advanced course in computational biology (700-level or above).

Suitable courses include 02-710 Computational Genomics, 02-730 Cell and Systems Modeling, 02-740 Bioimage Informatics, and 15-879, but **not** Machine Learning 10-701. The third Core Course is chosen by the student with **written approval** of the Assistant Director (Academic Advising). In the event that a course is not available, a course both of equivalent material and degree of difficulty may be substituted with **written approval** of the Assistant Director (Academic Advising).

B) Electives:

- Apart from the Core Courses, **a minimum of 36 units** must be earned in graduate-level courses (700 level or above). *Machine Learning 10-601* and *Computational Chemistry 09-560* are also acceptable here. Other courses, below 700 level, will need **written approval** of the Assistant Director (Academic Advising).

- A maximum of 27 units may be in undergraduate courses (200 level or above), which must be taken for a letter grade, and may not include a course equivalent to one previously required to complete a degree at any other institution.

- Students with weak to moderate programming background will enroll, during their first semester, for *Programming for Scientists 02-601*

- Students who do not have a Biology or Biology-related undergraduate degree will enroll, during their first semester, for *Applied Cell and Molecular Biology 03-709*

- To strengthen foundations in Computational Biology-related algorithms, all students are highly encouraged to enroll, during their first semester, for *Algorithms and Advanced Data Structures 02-613*

- All prerequisites must be taken for a letter grade (i.e., no P/F or audit).

- No grade lower than C shall be used for credit.

The departmental course offerings are available at
www.cmu.edu/bio/courses
http://lane.compbio.cmu.edu/education/courses.html

The university's complete <u>Schedule of Classes</u> can be found at www.cmu.edu/hub. Subject to the **written approval** of the Assistant Director (Academic Advising), relevant courses at the University of Pittsburgh (through cross-registration) may be taken for credit. *(see p. 8)*

Professional Issues in Computational Biology

Professional Issues in Computational Biology, 02-602 meets weekly and consists of several professional/social networking and informational sessions. These events are organized by the Assistant Directors. They are an opportunity for students to learn about resources available to them on campus and outside, share knowledge, and network with other students, employers and alumni. The primary goal of this course is to position students for an on-time graduation and to empower everyone with important tools necessary to find an internship, secure a job, or to further pursue a Ph.D.

All students will need to register for 02-602, a 1-unit course, and successfully complete this with a pass grade during both of their first two semesters. This course, although required, will not count toward the 99-units for graduation certification, but can count toward being full time status (36 units/semester)

Seminars, Invited Talks, and Journal Club

Each semester, all students may register for and attend the weekly seminars (*Graduate Seminar 03-750*; 1 unit and/or *Graduate Seminar 02-702*; 3 units). Graduate students are strongly urged to meet the speakers to broaden their knowledge of cutting-edge science and to make useful contacts; the faculty host can arrange individual or small group meetings for interested students.

Each semester, all students may attend the weekly Biological Sciences departmental Journal Club (*Graduate Research Seminar 03-755*; 3 units) during which Ph.D. students and faculty members give 20-minute presentations. Typically, M.S. students write and submit <u>six</u> 1-2 page reports about the presentations. The reports are due within a week of the talk and should be submitted electronically to Assistant Director (Academic Advising).

Note: Above courses are P/F, and do not count toward graduation requirements. Nevertheless, these courses are very beneficial in keeping abreast with current research and in networking, so we encourage students to enroll for these courses, particularly if they are interested in pursuing a Ph.D. or other advanced degree.

Research   Students who are interested in conducting research for academic credit take *M.S. Thesis Research 03-700 or 02-700* for research with Biological Sciences faculty mentor or Lane Center for Computational Biology faculty mentor respectively.

Up to 12 units of 02-700 or 03-700 may be counted toward the 99-unit degree requirement without defending a written thesis.

For more than 12 units of 02-700 or 03-700 to count toward the 99-unit total, the student must write a thesis document or paper for publication **and** present it to a committee in a public forum.

Typically, students contact faculty directly to learn about available research opportunities. To register for this class, please contact Assistant Director (Academic Advising) who will help fill out a **research approval form** prior to registration.

It is strongly advised that students wait until their second semester to begin research.

M.S. students are not eligible for research assistantships.

Internships   Students commonly secure internships in industry or academia during the summer between the first and second years, and less often during the academic year. The internship must be relevant to some aspect of computational biology.

International students who secure paid internships outside of Carnegie Mellon must register for *03-601R* as well as Curricular Practical Training (CPT), which is overseen by the Office of International Education (OIE). To obtain CPT, students must present the offer letter spelling out employment dates, work hours, and amount of wages or stipend. Note that International students are not eligible for CPT until the summer after their first full academic year. Tuition is not assessed for *03-601R* during the summer.

Students must contact the Assistant Director (Internships and Job Placement) during late fall about planning for an internship. Before registering for the course *Computational Biology Internship 03-601R* in order to get academic credit, **written approval** should be obtained from the Assistant Director (Internships and Job Placement) who will maintain contact with the internship supervisor. Units for *03-601R* vary according to the time commitment.

Registering for Classes   Beginning with the first fall semester, students register online for their own classes; information is available at www.cmu.edu/hub/registration. Students register online at www.cmu.edu/hub/sio with an Andrew ID.

To be full-time, students must register for at least 36 units per semester.

Students who wish to take a course outside of Carnegie Mellon at one of the other Pittsburgh Council on Higher Education (PCHE) institutions must complete the fillable PCHE Cross Registration Request Form from the HUB, complete and sign, and return it to the Biological Sciences Graduate Programs Office for permission and signatures. Only one course outside of Carnegie Mellon is permitted per semester.

Students needing assistance in registering for oversubscribed courses in the Mellon College of Science should contact the Assistant Director (Academic Advising); students needing assistance in registering for oversubscribed courses in the School of Computer Science should contact the Assistant Director (Internship and Job Placement).

Pass/Fail Courses

Pass/Fail courses are strongly discouraged unless it is a course that is not directly relevant to the student's program of study or if there is a medical hardship in completing a course. Taking a course for credit indicates an intellectual commitment to the material and may be viewed more positively by other professors and potential employers than a Pass. Potential employers gain more information about a student's ability from seeing a letter grade on a transcript than from a P. Also, Pass/Fail courses cannot be used to satisfy any MSCB program requirements or to satisfy any prerequisites.

With petition to and **written approval** from the Assistant Director (Academic Advising), students may elect to take a course Pass/Fail. Such a petition must give a compelling reason for taking a course Pass/Fail and must argue why that will not impact the student's program of study. Within the registration ADD period during the first two weeks of each semester, the student must fill out the Pass/Fail Approval Form found at www.cmu.edu/hub/forms.html and receive permission from the Assistant Director (Academic Advising) and the Department Head (Biological Sciences). Switching a course to Pass/Fail mid-semester will generally only be approved in cases of medical hardship.

Prerequisites may not be taken Pass/Fail.

Classes taken Pass/Fail may not be used to fulfill graduation requirements.

Pass/Fail status is irrevocable.

Auditing a Course

With approval of the MSCB Steering Committee, a graduate student may audit a course by obtaining permission of the instructor or teaching department and completing the Course Audit Approval Form (found at www.cmu.edu/hub/forms.html), including obtaining the signature of the Assistant Director (Academic Advising). Audited classes are not taken for credit and cannot be used to fulfill graduation requirements.

Adding a Course

During the early Add period of each semester, students may add a course by registering online. After the Add deadline, they may add a course by completing the Late Add Request Form (found at

www.cmu.edu/hub/forms.html) **and** obtaining permission of **both**: 1) the instructor or teaching department **and** 2) the Assistant Director (Academic Advising).

Dropping a Course	Students may withdraw from a course online. The university has a Drop deadline toward the end of the semester, after which the course appears on the student's transcript as withdrawn (W). The last day to withdraw from a class is the final day of classes.

Complete the appropriate form after the Drop deadline (found at www.cmu.edu/hub/forms.html), obtaining permission of **both**: 1) the instructor or teaching department **and** 2) the Assistant Director (Academic Advising).

Remember, however, you must maintain full-time status in the program, which requires you to be registered for 36 units.

Grades

To be in good academic standing, a student is expected to maintain an overall B average (GPA = 3.0) as well as a B average in the Core Courses. No grade lower than C will be used for credit.

Tuition and Fees

Complete information about tuition and fees is available at www.cmu.edu/hub/tuition/index.html. All tuition and fees must be **paid in full by the due date**; a student not in good financial standing will be dismissed from the program. Any exception must be discussed with the Directors of the MSCB program.

Students registering for summer courses (with the exception of *Computational Biology Internship 03-601R and M.S. Research 02-600R and MS Thesis Research 03-700R*) must pay appropriate tuition to register.

Academic Integrity

All at times students are expected to maintain ethical conduct as described in the university policies on Academic Integrity.

http://www.cmu.edu/academic-integrity/

Serious action will be taken against all students who are caught violating any of these rules. Consequences may include any or all of these: failing the course; a lower grade in the course; termination/reduction of tuition scholarship; dismissal from the program; or other action as decided upon by the administration of the program.

Graduation Ceremonies

MSCB students are certified for graduation by the Department of Biological Sciences in the Mellon College of Science.

Carnegie Mellon University holds graduation ceremonies in May only. Because there are no August or December commencement ceremonies, we

encourage students to participate in the May events. Students who graduate in December should stay in contact with the Biological Sciences Graduate Programs Office for details.

There are two May graduation ceremonies that pertain to M.S. Computational Biology students. The Department of Biological Sciences Diploma Ceremony and Reception are usually held on the Saturday afternoon before the university-wide Sunday Commencement. Students who have graduated the previous December, as well as those receiving their degrees in May or upcoming August, are eligible and strongly encouraged to participate.

The Carnegie Mellon University Commencement Ceremony is held on Sunday. Students who graduated in December, as well as those receiving their degrees in May or August, are eligible to participate.

Status

Full-time status

Students must be registered for **at least 36 units** during each semester to be considered full-time. Any questions about registration should be directed to the Biological Sciences Graduate Programs Office or Enrollment Services (the HUB).

Leave of Absence

Students who need to delay their studies for personal, medical or academic reasons may do so with a Leave Of Absence (LOA; leaving the university temporarily with a commitment to return). Students must contact the Assistant Director (Academic Advising) and the program co-directors to discuss their plans and fill out the appropriate Leave Of Absence form. Final approval of LOA is pending approval of the MSCB Steering Committee. The student's place in the program will be held until a mutually determined time. For more information refer to www.cmu.edu/policies/documents/StLeave.html.

Withdrawal

Students who need to withdraw from the program (leave the university with no intention of returning) for personal, medical or academic reasons must contact the Assistant Director (Academic Advising) to discuss their plans and fill out the appropriate Withdrawal form. For more information refer to www.cmu.edu/policies/documents/StLeave.html.

Section 2. Resources

Academic Advising

Orientation

There are two orientations for incoming graduate students. Both events take place in the weeks preceding the beginning of the fall semester.

The University-wide orientation organized by the Graduate Education Office introduces the students to university resources and services.

The Program Orientation introduces them to faculty, research, administration, policies and services. The Biological Sciences Graduate Programs Office and the Graduate Office of the Lane Center arrange for students to receive the necessary information for enrollment, registration and timelines.

Students matriculating in the spring semester should attend Carnegie Mellon's mini-orientation prior to the spring semester. There is no program-specific orientation at that time.

Advising for Coursework

Before each of the fall and the spring semesters, each student meets individually with two or more faculty of the MSCB Steering Committee to select courses and obtain approval. Selection of the third Core Course must be approved officially by the MSCB Steering Committee. Any changes must be brought to the attention of the Assistant Director (Academic Advising).

Monitoring Progress

Students who have specific concerns about their progress are urged to speak with the Assistant Director (Academic Advising) as early as possible. The Assistant Director (Academic Advising) meets with the student at least twice a semester and the MSCB Steering Committee meets with the student at least twice a year, providing guidance and monitoring the student's overall progress.

Notification and Consequences of Inadequate Progress Toward the Degree

If the MSCB Steering Committee determines that the student is making inadequate progress, then together with the committee, the student must formulate a plan to correct any deficiencies. Consequences of continued failure to make satisfactory progress or not being in good academic standing can range from verbal and written warning to termination/reduction of scholarship and/or dismissal from the program. The MSCB Steering Committee discusses each student on a case-by-case basis.

Student Rights in Academic Conflicts

A student wishing to appeal a departmental disciplinary decision should first speak with the faculty member directly involved. A student who is uncomfortable approaching the faculty member may discuss the matter with the Assistant Director (Academic Advising). If the conflict cannot be resolved on this level, the student is referred to the Program Co-Directors or the relevant Department Head(s) who may, with the student's

permission, meet with both the student and the faculty member involved. The student may also meet with the departmental MCS Ombudsperson.

A student who is not satisfied with the achieved resolution may file a formal written appeal to both the Associate Dean for Graduate Affairs and the Dean of the Mellon College of Science. The policies and procedures governing this process are explained in detail in the Carnegie Mellon Graduate Student Handbook section entitled "Academic Standards and Actions." The Mellon College of Science Grievance Procedures are available at www.cmu.edu/mcs/policies/grievance.html.

University Graduate Student Ombudsperson

Any grievance that cannot be resolved at the departmental level should be referred to the Assistant Vice Provost for Graduate Education, Dr. Suzanne Laurich-McIntyre (suzannel@andrew.cmu.edu).

Support Services

Office of International Education (OIE)
www.cmu.edu/oie

The Office of International Education (OIE) provides many important services to international students, including advice on immigration, social and cultural issues. These services are explained during the University-wide Graduate Student Orientation in August before the fall semester begins.

Intercultural Communication Center (ICC)
www.cmu.edu/icc

The Intercultural Communication Center (ICC) offers non-native English speakers language support and cross-cultural training, and helps TAs develop fluency. All international students are strongly encouraged to attend seminars and workshops hosted by the ICC. This will prepare students seeking internships and jobs in the USA in fluent English Speech.

Global Communication Center
www.cmu.edu/gcc

The Global Communication Center (GCC) is a new tutoring resource supporting students' efforts to improve their written, oral, and visual communication skills. They support any student, at any level, in any discipline, at any stage of the composing process.

The GCC offers free one-on-one tutoring for academic communication projects in their location on the ground floor of the Hunt Library. Tutors are specifically trained in communication theory, research, and instruction. Students can meet with a tutor by making an appointment (www.cmu.edu/gcc/appointment/index.html) or by walking in. (http://www.cmu.edu/gcc/walkin/index.html). It is recommended that students bring electronic copies of the instructor's assignment and any materials the student has prepared.

Libraries
www.library.cmu.edu

There are three university libraries that provide research support for science students: the Roger Sorrells Engineering and Science Library, the Hunt Library and the Mellon Institute Library. The Mellon Institute Library contains reference materials for biology, biochemistry, chemistry, environmental sciences and industrial health. First-year students receive a tour during Program orientation; one-on-one informational sessions can also be arranged.

Eberly Center for Teaching and Excellence
http://www.cmu.edu/teaching/eberly/

The Eberly Center offers a wide range of services for graduate students interested in learning more about teaching and learning. These include seminars on teaching, teaching workshops, teaching observations, and assistance in preparing materials for academic teaching positions.

Computing Services

Many general computer questions can be resolved quickly by contacting the Help Center (412-268-HELP [8-4357] or advisor@andrew.cmu.edu).

If the Help Center cannot resolve a problem remotely, the departmental System Administrator can provide hands-on technical support for computers, printers and software. To place a service request to the System Administrator, email bio-support@andrew.cmu.edu. For emergencies, call the Systems Administrator directly at 8-4535.

In addition to general technical support, the Systems Administrator can help with computer purchases, software purchases and computer retirement and disposal.

Enrollment Services (the HUB)

The HUB provides a range of enrollment services. Information regarding the academic calendar, forms, official transcripts, schedule of classes, online registration, graduation procedures and other issues can be found on the website (www.cmu.edu/hub).

MSCB Student Lounge (MI 629B)

MSCB students may use the lounge to spend time between classes, do group projects, or just hang out. For key-number access to the lounge please contact Nate Frezzell in the Biological Sciences department.

Counseling and Psychological Services
http://www.cmu.edu/counseling/index.html

Graduate school is often a difficult and stressful time of life. Many MSCB students are studying far away from home and from their previous support systems. We encourage students to make use of these confidential counseling services for additional support as needed.

Counseling and Psychological Services (CAPS) offers students the opportunity to talk privately about personal, academic, or other concerns in a safe, confidential setting. *All counseling center services are provided at no cost.*

Graduate Student Assembly

The Graduate Student Assembly (GSA) is the branch of student government that represents all graduate students at Carnegie Mellon. In addition to working with other members of student government, university

administration, and external advocacy groups, the GSA plans a variety of social events throughout the year. Keep an eye out for emails from both the Biological Sciences and Lane Center departmental representatives (www.cmu.edu/stugov/gsa/reps/index.html) with information about GSA events and initiatives.

Special Interest Groups

Various organizations exist to provide support for groups underrepresented in science. Information about these groups can be obtained from the Office of Graduate Education (www.cmu.edu/graduate).

Honorary Societies

Graduate students are encouraged to belong to professional societies such as Phi Kappa Phi and Sigma Xi, and are nominated, if qualified, by either the department of Biological Sciences or the Lane Center. They are also urged to join the societies specific for their sub-discipline.

Student Organizations

Students are encouraged to participate in one or both of the following Biological Sciences departmental graduate student-driven organizations:
- The Sciences Teaching Club
- Career Club

Students' involvement complements their academic development as well as their professionalization.

Class Representatives

The Class Representatives (consisting of a volunteer representative from each Ph.D. and M.S. class) help facilitate the flow of information between the Biology Graduate Programs Office and the graduate students. The Class Representatives and Graduate Programs Manager meet approximately 2-3 times a year to discuss various issues initiated by either the Biology Graduate Programs Office or by the students through their Class Representatives. This system is an efficient and effective way for the student body to voice its concerns and to receive information.

Compliance Issues

Environmental Health and Safety Training

Each graduate student in the MSCB program must complete laboratory, chemical and biological safety training that is presented by Environmental Health & Safety (www.cmu.edu/ehs) during the Program Student Orientation prior to beginning regular coursework; students who work with or near radioactive substances must undergo radiation safety training (www.cmu.edu/ehs/radiological/training.html).

Sexual Harassment Training

All graduate students are required to receive sexual harassment training, which is given in the fall semester or can be taken online www.cmu.edu/hr/learning/eLearning/SHA-training.html. The sexual harassment policy is available at www.cmu.edu/policies. To speak to a sexual harassment advisor, please contact the university sexual harassment hotline at 412.268.7445.

Animal Training

Animal training is required for any individual who is listed on an animal protocol. Currently, training is offered through the University of Pittsburgh and must be completed before research studies involving laboratory animals can begin:

- Animal Session (by video)

- Small Animal Training - (rodents) must be retrained every 3 years

- Large Animal Training - (rabbit, ferret, cat, dog, pig, sheep, goats) must be retrained every 3 years

- Primate Training - must be retrained annually

For more information on training, please contact:
Marilee Rose, Training Coordinator
Research Conduct and Compliance Office
412-383-1737
mrose@pitt.edu

Intellectual Property

Students are required to comply with the University Policy on Intellectual Property (www.cmu.edu/policies/documents/IntellProp.html). This policy was developed to encourage and support the generation and dissemination of new knowledge by faculty, staff and students. It applies to patentable inventions, copyrightable material or trade secrets, works of art, and inventions and creations that might be considered proprietary.

Ethics

At all times, students are expected to conform to the highest ethical standards; consequences for academic or scientific misconduct are severe and may include dismissal from the program. The University Policy against Cheating and Plagiarism can be found at www.cmu.edu/policies/documents/Cheating.html. Carnegie Mellon's Office of Research Integrity and Compliance is sponsoring a Responsible Conduct of Research (RCR) Seminar Series to provide participants with an introduction to topics typically included in RCR curriculum. http://www.cmu.edu/research-compliance/responsible-conduct/training.html.

Section 3. Financial Issues

Tuition and Fees

Information about tuition and fees is available at www.cmu.edu/hub/tuition. All tuition and fees must be paid in full by the due date; **a student not in good financial standing will be dismissed** from the program. Any exception to this policy must be discussed with the Department Heads.

Health Insurance and Services

Carnegie Mellon has a Student Health Insurance policy requiring full-time, degree seeking students to carry adequate medical insurance, unless you are enrolled as the dependent, partner/spouse or principal in an employer- or government-sponsored insurance plan (see the Carnegie Mellon University Student Health Insurance Policy at www.cmu.edu/policies/documents/StudentInsurance.htm).

The university offers two levels of health plans. It is the responsibility of each student to make arrangements with Student Health Services to either pay for their insurance at the beginning of the semester, or elect a payment plan over the course of the academic year. Optional dental and vision insurance are also offered. More information is available at the Student Health Services website www.studentaffairs.cmu.edu/HealthServices or by email to shinsure@andrew.cmu.edu.

The Student Health Services Center provides general and some specialized medical care at a discount or free of charge to all full-time Carnegie Mellon students. There are fees for laboratory tests and prescription drugs at the on-site pharmacy. Information can be found at www.cmu.edu/health-services.

Employment During the Academic Year

M.S. students are allowed to work for hourly wages at Carnegie Mellon, provided academic progress is not compromised. Paid research must be kept separate from projects done for tuition-based academic credit (*M.S. Research 03-700 or 02-700*).

For students who desire to earn wages, there are limited employment opportunities in faculty research groups. Students are responsible for seeking out such opportunities.

It is strongly advised that students wait until their second semester to begin work on a paid project. The number of hours worked should not exceed 12 hours per week. M.S. students are not usually eligible for teaching assistantships.

University Research Funding

The Office of the Assistant Vice Provost for Graduate Education administers two types of professional development funding for graduate students university-wide. The GSA Graduate Student Conference funding and the GradUate Small Project Help (GUSH) are supported by the Graduate Student Assembly (GSA) and the Provost's Office.

1. Conference Funding Awards, $500 per student, provide the means for graduate students to 1) make presentations at key conferences/exhibitions in their fields or 2) simply attend conferences and learn about the broader field of study to which they belong.

2. GUSH Research Funding awards, $750 per student, defray costs incurred in the completion of research required for a graduate degree at Carnegie Mellon.

Outside Fellowships

Students are encouraged to obtain their own source of funding through fellowships such as those sponsored by the National Institutes of Health (NIH) or the National Science Foundation (NSF). The university's Fellowships and Scholarships Office (FSO) maintains a database of financial aid and fellowship information (www.cmu.edu/fso). The MSCB Steering Committee is available to help students complete these applications.

For submission, all applications must go through the Biological Sciences Business Manager's Office, that is, the Business Manager must be notified in advance of the application submission and must receive a full copy of the application when it is completed.

Assistance for Individuals with Disabilities

Students with disabilities are encouraged to self-identify with Equal Opportunity Services by contacting Larry Powell, 412-268-2013, lpowell@andrew.cmu.edu, to access the services available at the university and initiate a request for accommodations.

Emergency Loans

All students are eligible for the Emergency Student Loan, which is an interest-free and emergency base loan repayable within 30 days. It is available through the Office of the Dean of Student Affairs; students may apply for the loan by stopping in the Student Affairs Office or by calling 268.2075 for an appointment.

Housing

Carnegie Mellon does not provide housing for graduate students. The university's Community Housing Office keeps updated lists of apartment rentals, landlord evaluations and other pertinent information. The office also offers limited transitional housing for students while searching for an apartment before the beginning of the academic year.

Facilities and Equipment

The Biological Sciences department owns and maintains equipment such as centrifuges and autoclaves for departmental members' use. It is the responsibility of each graduate student engaged in wet-lab research to be trained in proper use and maintenance of this equipment. It is also imperative that logs are signed and any problems noted. Individual laboratories are liable for repair and replacement costs if their personnel misuse equipment.

Phone use

Phone use in the department is restricted to business calls only. Occasional local personal calls are permitted, but personal long-distance and international calls are strictly prohibited.

Section 4. Forms

Forms for the M.S. in Computational Biology program
www.cmu.edu/bio/resources/forms

M.S. Program Acceptance Form

M.S. Thesis Defense Form

Academic Advising Form including Graduation Plan Worksheet

Declaration of Research for Credit Form (Research Approval Form)

Declaration of Internship for Credit Form

Forms for Enrollment Services (the HUB)
www.cmu.edu/hub/forms.html

Pass/Fail Approval

Course Audit Approval

Late Add Request (current semester only)

Leave of Absence

Return from Leave of Absence

Withdrawal

Enrollment Verifications are available from Student Information Online, under the Academic Info tab as "Request Verification."

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