

Department of Biochemistry and Molecular Biology

Student Guide – MHS and ScM Program

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INTRODUCTION

The goals of the Department of Biochemistry and Molecular Biology are to increase current knowledge of the biochemical and molecular basis of normal and abnormal cellular processes and to train highly qualified scientists who, through research, teaching, and service will continue to provide new insights into the biochemical, molecular, and biophysical underpinnings of biomedical issues that have an impact on the health of the public. Critical biomedical issues centered in reproduction are addressed by the Department's Division of Reproductive Biology.

MHS PROGRAM REQUIREMENTS

The M.H.S. program can be completed in one academic year. The program consists of coursework and the writing of a scholarly, library-based thesis. There is substantial flexibility in the program, which is designed to allow students ample opportunity to pursue desired coursework in the Department of Biochemistry and Molecular Biology as well as in other departments within and outside the School of Public Health. Many of the M.H.S. students will enroll to improve their chances for medical or other professional schools, while others will pursue advanced graduate work or positions in industry or in the public health arena.

Required Coursework

The following courses are required: Fundamentals of Reproductive Biology (120.620), Introduction to Molecular Biology (120.602), Molecular Biology of Disease (120.603), Molecular Biology of Carcinogenesis (120.615), Molecular Endocrinology (120.621), MHS Thesis Preparation (120.860), Thesis in Reproductive Biology (120.870), Research Ethics (550.860) and Public Health Perspectives (550.865). Students are expected to attend, and participate in, the University-wide Seminar Program in Reproductive Biology; the Department of Biochemistry and Molecular Biology Seminar program; and the Division of Reproductive Biology journal club discussions of current literature.

Additional courses are highly recommended: Biochemistry - An Introductory Course I and II (120.600, 120.601), and Cell Biology (120.626). A further list of recommended courses will be made available to the students each fall. Students, in consultation with their advisors, may select courses according to their individual needs and interests.

Requirements for Graduation

- Must have a **minimum of 16 units per term**, and **64 total units** to graduate.
- Of the 16 units per term, *up to four units can be **Special Studies (120.840)***. This means that a *minimum of 12 units* must be didactic, non-Special Studies courses.
- Must have a G.P.A. of **2.5** to graduate
- Failure to maintain a G.P.A. of 2.25 throughout the duration of the program will be considered grounds for dismissal.
- A grade of D or F in any course is grounds for dismissal.
- The independent study thesis (120.870) must be completed, with a grade of B or better.

If a grade of B or better is not received on the thesis, the student will not be eligible for May 2009 graduation; however, they have the option to rewrite if they wish to be eligible for the MHS degree for May 2010 graduation. Resubmitted thesis must be submitted to the thesis advisor by August 15, 2009. The rewritten thesis must be a B grade quality or better to be eligible for the MHS degree.

Although the original grade of C, D or F will stay on the student's transcript, the Department will submit a letter to Records and Registration to note that the thesis requirement was satisfactorily completed.

- Satisfy School-wide requirements for M.H.S. students:
 - Completion of the computer-based training module on Academic Ethics (<http://commprojects.jhsph.edu/academics/AcademicEthics.cfm>). Students need to complete this module within two terms of matriculation (i.e., by the end of second term) and must complete it before graduating.
 - Completion of Public Health Perspectives (550.865; first and second terms) and Research Ethics (550.860; on-line module course, all terms).

Competencies

A table showing the academic competencies M.H.S. students in the Department are expected to obtain prior to graduation is available at http://www.jhsph.edu/dept/BMB/Resources_Links/index.html.

ScM PROGRAM REQUIREMENTS

The Sc.M. Program is a research-based program that requires two years of study, including coursework, the completion of original research under the guidance of a faculty mentor, and the writing of a research-based thesis. Sc.M. students typically pursue coursework in parallel with requirements for the MHS degree during their first year, during which they choose a laboratory in which to conduct research. Typically, Sc.M. students present their findings at national meetings and publish their research results in peer-reviewed journals. Some Sc.M. graduates continue on to advanced graduate study (M.D. or Ph.D.), while others obtain research positions in industry or government.

Required Coursework

The courses required of Sc.M. students include those required of M.H.S. students: Fundamentals of Reproductive Biology (120.620), Introduction to Molecular Biology (120.602), Molecular Biology of Disease (120.603), Molecular Biology of Carcinogenesis (120.615), Molecular Endocrinology (120.621), Thesis in Reproductive Biology (120.870), Research Ethics (550.860) and Public Health Perspectives (550.865). All students are expected to attend, and participate in, the University-wide Seminar Program in Reproductive Biology; the Department of Biochemistry and Molecular Biology Seminar program; and the Division of Reproductive Biology journal club discussions of current literature.

Selecting a Thesis Advisor/Laboratory Research

About halfway through the first year, a student who is recruited to the Sc.M. program, or a current M.H.S. student who wishes to transfer to the Sc.M. program, will begin discussions with faculty whose research is of interest to them. For the student to pursue the Sc.M., it is essential that an appropriate faculty member of the Department be identified in whose laboratory the research is to be done. It should be understood that a given faculty member may or may not opt to accept a particular, or any, Sc.M. student in a given year.

Requirements for Graduation

- Students must maintain a minimum GPA of 2.5 throughout the duration of the program. Failure to do so will be considered grounds for dismissal. The minimum required GPA for graduation is 2.5.
- Students are expected to receive a C or better in all non-required classes. Failure to do so will be treated as a serious matter. A grade of D or F in any course is grounds for dismissal.
- The Sc.M. thesis will be read by a committee consisting of four readers, including the student's thesis advisor. The readers should be at the rank of Assistant Professor or higher. A minimum of three Departments of the University, including at least two from the Bloomberg School of Public Health, must be represented. Two readers (the advisor and one other) must be from the student's Department. All School timetables must be met for the appointment of the thesis committee and the submission of the thesis.

Competencies

A table showing the academic competencies Sc.M. students in the Department are expected to obtain prior to graduation is available at http://www.jhsph.edu/dept/BMB/Resources_Links/index.html.

RESPONSIBLE CONDUCT OF RESEARCH

All research students (Ph.D., Sc.M. and M.H.S. students) must complete a course in responsible conduct of research before graduation. Currently, courses 550.860 Research Ethics offered online in all terms, and course 306.665 Research Ethics and Integrity: U.S. and International Issues, taught in the third term, satisfy the School's requirement.

Students should also refer to the Bloomberg School of Public Health Student Handbook (http://www.jhsph.edu/student_affairs) for Policy and Procedures on the subject of Academic Ethics.

Also, before beginning contact with either human or animal subjects, students, as all researchers, must obtain the appropriate approval for their projects from either an Institutional Review Board or the Institutional Animal Care and Use Committee. In both cases, the student's faculty mentor must be involved in this process, since the protocol for the research project is submitted under the faculty's name with the student listed as a student investigator. It is important to remember that NO contact can be made with humans, human tissue, human samples or human records without prior approval of the protocol by the IRB. NO animals can be purchased for examination without an IACUC protocol approval.

It is important for students to check to make sure they are either listed on their mentor's approved protocol or have obtained approval for their research protocol, in collaboration with their mentor.

ADMINISTRATIVE ISSUES

Animal Use

It is mandatory that all individuals working with animals at Johns Hopkins University enroll in the Animal Exposure Surveillance Program. The program is designed to prevent occupation-related disease among those working with animals. Enrollment consists of the completion of an AESP form at http://www.hopkinsmedicine.org/hse/east_balt.htm#Forms.

Students should see Stephanie Steele for more information. It is also mandatory that all individuals working with animals complete an on-line training course located at <http://secure.lwservers.net/default.cfm>. Animal protocols will not be approved or renewed unless individuals working with animals complete this training.

Classroom/Conference Room Scheduling

Rooms W8504, E8015, and W8503A are available for lab meetings, journal clubs, student exams, and other gatherings. Calendars are maintained online and can be accessed by logging onto Webmail from any computer (<http://webmail.jhsph.edu>) and selecting Public Folders, and then Biochemistry and Molecular Biology. Shanell Maniece can provide assistance with scheduling, when needed. When a room is scheduled for a student exam, please notify Sharon Warner.

Masters Study Room

At orientation, students will be given a key to the Department's Masters Study Room, W8517. The room is equipped with wireless internet access and has several tables, which can be pushed together for group study and discussions. The Department has also provided a microwave and small refrigerator. Department seminar flyers and other notices relevant to the Masters programs will be posted in this room. MHS students should also regularly check their Department mailboxes, located in this room, for personal notices and information.

Copying

As a convenience to the Masters students, who may spend much of their study time on the 8th floor, MHS students may obtain access to make copies on Equitrac-equipped copiers, such as the one located in W8034, with the understanding they will be billed each month for the actual cost to the Department. This is the same cost, or less, than students would pay to use the public copiers at the Library in the School's basement. Students who wish to take part in this Department program should see Shanell in W8041. Students are asked to limit their copying to materials related to their studies, and to be respectful of faculty and staff who may need the copier for time-sensitive projects.

Demographic Data

Any changes regarding one's personal status, home address and phone numbers, etc. must be reported to Stephanie Steele or Joanna Bizub so that online systems can be updated. We also ask that students provide a forwarding address upon graduation or departure from the Department.

E-mail accounts

Students apply for a free e-mail account from the School during the departmental orientation. Students may also contact Joanna Bizub to obtain an account request form. While many students may utilize

email accounts through their undergrad program, or through gmail, etc., it is critical that they obtain a jhsph.edu account and review it regularly (or have it forwarded to the student's account of choice.) Many pertinent School and Department notices will be sent to jhsph.edu listserves.

Facilities Management

Problems with facilities (lights, leaks, etc.) and/or laboratory equipment should be reported immediately to the student's mentor or the Administration Office. Shanell Maniece handles JHU maintenance calls (facilities) and Joanna Bizub handles calls to outside vendors (equipment).

Student Assistance Program (SAP)

This program provides support to students in dealing with the pressures and problems they encounter during their academic careers. SAP services are private and confidential, in accordance with state/federal laws and University policies. There is no cost to a student for utilizing SAP services. For more information please call 410-955-1220, 443-997-3800 or visit the SAP website at www.fasap.org. (see the Bloomberg School of Public Health Handbook at http://www.jhsph.edu/student_affairs/2007-08%20SPH%20Student%20Handbook.pdf)

Faxing

The Department has two fax machines located in Rooms W8041 and W3606. Local faxes are free, but out-of-state faxes (excluding 800 numbers), business and personal, must be entered in a log book at the time they are sent. Personal faxes costing over \$1.00 will be billed to the sender.

Fire Alarms

The fire alarm system is installed for the express purpose of alerting building occupants and responsible emergency personnel to the fact that a fire, explosion, or other emergency has been discovered within the building. All occupants must shut the door to their lab or office and exit the building immediately whenever a fire alarm sounds. For more information on Safety Regulations and Emergency situations, please see the Bloomberg School of Public Health Handbook (http://www.jhsph.edu/student_affairs).

Foreign Students: Visa Applications and Other Issues

Foreign students are required to report to the Office of International Services located on the 4th Floor of Reed Hall (1620 McElderry St.) on the first day of arrival in the U.S. They should bring their visa and I-94. During the student's tenure in the department, all visa extensions and other issues pertaining to visa status are handled by Joanna Bizub, in cooperation with the OIS. Students are encouraged to visit the Office of International Services web site at <http://www.hopkinsmedicine.org/intlsvcs/>. This site provides information about visa issues and other valuable information. This site also provides a link to the JHMI International Society. OIS can be reached by phone at x5-3371.

ID Badges

ID badges must be visible at all times on School premises. During the School's orientation, badges are issued at the Admissions office. To obtain a new or replacement ID badge at a later date, students must present a photo ID and an ID Request Form authorized by the Student Affairs Office, to Room 108, Nelson Building, Johns Hopkins Hospital. A small fee will be assessed by the ID Office if an old badge

is not returned, and/or if a new photo is requested. Report lost badges to the Departmental Administrative Office. In addition to copy access, a student's badge is required for entrance to many Johns Hopkins facilities.

JHED

Johns Hopkins Enterprise Directory is an on-line source of address, telephone, e-mail and other contact information for faculty, staff and students throughout the Johns Hopkins University. Incoming students' information is pulled into the directory from the Registrar and Payroll databases. It is imperative that students maintain current information in JHED since other sources within the system depend on the directory information. To verify and update information, log on to <https://my.johnshopkins.edu/>. In the process, the student will be furnished with a USERID and will be prompted to create his or her own password (first time). After verifying information, the student will receive an electronic confirmation message from the Systems Administrator. The JHED userid and password will be required to access other secure online JHU systems.

Laptop and LCD projector

The Department has two Dell laptops and LCD projectors available for lab meetings, journal clubs, student exams, etc. Calendars are maintained online and can be accessed by logging onto Webmail from any computer (<http://webmail.jhsph.edu>) and selecting Public Folders, and then Biochemistry and Molecular Biology. Shanell Maniece can provide assistance if needed.

Lockers

Students should obtain locker assignments during Registration. After registration, students can obtain locker assignments from the Mail Services Office, Room WB401. Lockers are cleaned and fumigated every June. All items must be removed before the date of cleaning. Items left in lockers during the cleaning period will be discarded. The school is NOT responsible for items left in a locker. A notice will be posted in advance.

Mailboxes

Departmental mail is distributed twice daily. Departmental mailboxes are independent from the School's mailboxes in the basement. Mailboxes are maintained in W8517 for all MHS students in the Department. Mailboxes are maintained in W3606 for ScM students pursuing their research in 2nd and 3rd floor faculty labs.

Parental Leave Policy for Graduate Students and Postdoctoral Fellows

Salaried graduate students and postdoctoral fellows at the Johns Hopkins Bloomberg School of Public Health may request 30 days of paid parental leave following the adoption or birth of a child. Additional *unpaid* leave may be granted at the discretion of the advisor. Parental leave applies to either parent. If both parents are graduate students and/or postdoctoral fellows in the same School, both may request simultaneous parental leave. Complete details regarding this policy can be found on page 73 of the Bloomberg School of Public Health Student Handbook at http://www.jhsph.edu/student_affairs.

Timesheets and Pay Dates

ScM students will be compensated at a rate of \$11.00 per hour for 19 hours per week, for up to 12 months (starting when they enter a lab, usually in June or July.) Compensation beyond the 12-month period, if the student has not completed graduation requirements, is at the discretion of the advisor. No more than 19 hours may be submitted each week, including during summer breaks and winter intersession. Timesheets, approved by the advisor, should be submitted each Friday to Joanna Bizub, for payment the following Friday. Students are encouraged to sign up for Direct Deposit; please see Joanna Bizub for more details. Paper checks will be put in student mailboxes on payday. Direct deposit stubs can be viewed at <https://essapps.jhu.edu/webapp/FlexBen/FlexBenApp> - paper stubs are not distributed.

Radiation Badges

Badges to monitor external radiation exposure are issued to ScM students upon application. Badges are read and replaced on a quarterly basis. When a student receives a new radiation badge, he or she should return the previous one to Shanell Maniece.

Radiation Safety training is held the 2nd and 3rd Tuesday of each month from 1:00 – 4:00 p.m. This training is mandatory for 1st year students and strongly encouraged for those students and postdoctoral fellows who have never received formal training in handling of radioactive materials. Registration is required. Please call the Radiation Control Office at x5-3710 to register.

http://www.hopkinsmedicine.org/hse/training_schedule/training_schedule.htm

Registration

Students are required to register online at <https://isis.jhu.edu>. Students are expected to have their registration approved in advance by their advisors. More specific course information will be distributed by Sharon Warner prior to each term.

Safety

The Johns Hopkins University Safety Policy and Procedure Manual is available online at <http://www.Hopkinsmedicine.org/hse>. All students must understand that it is their responsibility to comply with appropriate safety and health standards as issued by the Department and University. All unsafe conditions should be reported immediately to the student's faculty mentor or to Stephanie Steele.

The Office of Safety and Environmental Health (OSEH) has the responsibility of providing guidance and direction in all phases of the safety program. It conducts annual safety and environmental inspections of our laboratories and facilities, advising administration of unsafe conditions or non-compliance with federal and state regulations.

Seminar and Bulletin Boards

Seminars, symposia and important notices are posted on the Bulletin Boards located in the 8th floor corridor and on the 3rd floor in room W3606. Notices of particular interest to the MHS and ScM students are also posted in the Masters Study Room (W8517.) The daily activities are prominently displayed and students should regularly check these boards.

DEPARTMENTAL ACTIVITIES

Happy Hour

A student-run (by BMB students) social hour is held each Friday from 4:30-6:00 p.m. in the Student Lounge Court. This is open to all in the School. Beer and soft drinks are sold; pretzels and potato chips are free.

Holiday Party

The Department has a holiday party in mid-December held on the 9th floor, usually on a Friday at 5:00 p.m. Families, including children of all ages, are encouraged to attend. The Department provides refreshments, some entrees, music, and gifts for the children. Attendees are asked to bring a food item.

Picnic

A Departmental picnic is held in the fall at an area park with various recreational facilities. Families are invited and encouraged to attend. Refreshments and food are provided by the Department but entrance to the park is paid by the attendees. Announcement of date, place, etc. is made early in September.

Student Luncheon

A student luncheon is held the first day of classes in September to welcome the new incoming students. Refreshments are provided by the Department.

“Cookie Time”

An informal gathering occurs every day at 4:00 p.m. in the 8th floor lunchroom for cookies and other snacks. Snacks are provided by the Department.

TRAINING FACULTY

Dr. Scott Bailey	W8708	scbailey@jhsph.edu	7-4989
Dr. Terry Brown	W3102	tbrown@jhsph.edu	5-1055
Dr. Randy Bryant	W8025	fbryant@jhsph.edu	5-3895
Dr. Janice Evans	W3112	jpevans@jhsph.edu	4-5557
Dr. Eric Grote	E8133	egrote@jhsph.edu	7-4989
Dr. Leslyn Hanakahi	W8001A	ghanakah@jhsph.edu	7-2515
Dr. P. C. Huang	W8509	pchuang@jhsph.edu	4-6910
Dr. David Levin	E8135	levin@jhmi.edu	5-9825
Dr. Michael Matunis	E8626	mmatunis@jhsph.edu	4-6878
Dr. Roger McMacken	W8010	rmcmacke@jhsph.edu	5-3949
Dr. Paul Miller	W8515	pmiller@jhsph.edu	5-3489
Dr. William Wright	W3508	bwright@jhmi.edu	5-7830
Dr. Barry Zirkin	W3606C	brzirkin@jhsph.edu	5-7827

ADMINISTRATION (W8041 & W8503)

Joanna Bizub	Budget Analyst	jbizub@jhsph.edu	5-3671
Gerry Graziano	Academic Assistant	ggrazian@jhsph.edu	5-3672
Shanell Maniece	Administrative Secretary	smaniece@jhsph.edu	5-3671
Stephanie Steele	Department Administrator	ssteele@jhsph.edu	5-3655
Sharon Warner	Academic Coordinator	swarner@jhsph.edu	5-3672

HELPFUL WEB LINKS

www.jhsph.edu/dept/bmb

www.jhsph.edu

http://www.jhsph.edu/student_affairs

<http://commprojects.jhsph.edu/courses/>

www.welch.jhu.edu

<http://www.hopkinsmedicine.org/hse/>

www.fasap.org

www.hopkinsmedicine.org/intlsvcs/

www.jhsph.edu/GER

<http://www.controller.jhu.edu/depts/tax/index.html>

<http://www.jhu.edu/animal/forms1.html>

<https://secure.lwservers.net/default.cfm>

<https://my.johnshopkins.edu/>

<http://www.hopkinsmedicine.org/hse/radiation.htm>

<https://isis.jhu.edu>

BMB Web Site

School Home Page

Information for Students
(including Student Handbook link)

Course Catalog

Welch Medical Library Home Page

Safety Information

Student Assistance Program

Office of International Services

Office of the Associate Dean for
Graduate Education and Research

JHU Tax Office

Forms – Animal Use

Animal Use On-line Training Course

Johns Hopkins Enterprise Directory

Radiation Safety

Registration