

July, 2009

TO: Incoming Students in Molecular and Cell Biology

Dear Entering Students:

We are delighted that you will be starting graduate school with us this fall.

Enclosed is a packet with information listing the orientation schedule for the week of August 24th. Additional information pertaining to the Ph.D. Life Science programs at Brandeis can be found on the web pages at: <http://www.bio.brandeis.edu>.

We will have a short meeting to discuss your academic schedule and any other questions you might have on Monday, August 24th from 1:30pm – 2:00pm, Shapiro Science Center, 1st level conference room, Room 109.

If you have any questions before you arrive, you are welcome to contact Marcia in the Biology Office 781-736-3100; cabral@brandeis.edu, or me via email; sengupta@brandeis.edu.

I look forward to seeing you soon and enjoy the rest of the summer.

Sincerely,

Piali Sengupta
Chair, Graduate Committee

**MOLECULAR AND CELL BIOLOGY, Orientation Schedule 2009
BRANDEIS PROGRAM GUIDE AND ACTIVITIES SCHEDULE - REVISED**

Monday, August 24th:

11:30 am – 1:00 pm Life Science Luncheon and Orientation Meeting, Volen 201
1:30 pm - 2:00 pm Short Biology meeting for PhD and MS students, Shapiro Science Center, 1st level conference room, Room 109
Group Picture will be taken
2:00 pm - 4:00 pm International Students MANDATORY meeting

Tuesday, August 25th:

8:45 am - 12:30 pm GSAS New Master's and PhD Student Orientation Program
Shapiro Campus Center Theater
12:30 pm – 1:30 pm Lunch hour
1:30 pm – 2:30 pm Chemical Safety Talk, Andy Finn, Rosenstiel 118
2:30 pm – 4:30 pm Radiation Safety Talk, Robin Bell, Rosenstiel 118
(Required prior to start of your first rotation)
4:30 pm – 5:00 pm Down Time
5:00 pm – 8:00 pm Faculty Bazaar, **Rosenstiel 118**, refreshments served
The bazaar provides brief overviews of the research interests of all the faculty and an opportunity to meet with individual faculty to discuss rotation and research opportunities.

Wednesday, August 26th:

9:00am – 3:30pm Workshop for GSAS TA orientation for PhD students will be held in Olin-Sang Auditorium. Although Life Sciences students don't TA until their second year, this is a good way to get started and to meet people. Light lunch will be provided. Mandatory meeting
5:00 – 8:00 pm Faculty Bazaar, **Rosenstiel 118**, refreshments served

Thursday, August 27th:

3:00 pm – 4:15 pm **FIRST DAY OF CLASSES**
Library Tour, Gerstenzang Lobby
Kathy Button & Jen Ferguson
5:00 pm – 8:00 pm Faculty Bazaar, **Rosenstiel 118**, refreshments served

Friday, August 28th:

11:00 am Rotation advisor preferences are due in the Biology Office
4:00 pm Graduate Student Reception for new and returning students. TBA
5:00 pm Rotation selections will be posted in the Biology Office and also emailed to each of you

Friday, September 4th

12:15pm, Life Science Pizza Party, Red Square

Monday, September 14th

1:00 pm – 2:00 pm Interdisciplinary Programs Orientation (QB program)
Shapiro Student Center, Rm 313
Meeting is optional for graduate students

****PLEASE NOTE:** All foreign students must contact Nancy Nies to set up ESL interviews at 781-736-3991 or by email: nies@brandeis.edu

SUMMARY OF REQUIREMENTS FOR MOLECULAR AND CELL BIOLOGY PH.D.

The Graduate Committee: Piali Sengupta (Chair), Bruce Goode, Michael Marr, and Daniela Nicastro.

Summary of requirements for candidacy to the Ph.D. program

All MCB students must complete 4 rotations, pass 6 lecture courses with a grade of B- or better, pass a qualifying exam ('Outside') at the end of the first year, pass another qualifying exam ('Inside') in the second year, and TA two courses. In addition, all first year graduate students must register for and attend Ethical Practice in Health-Related Sciences (Cont 300b), which is a not for credit course.

Courses: Three courses are mandatory for all Ph.D. students. These are Biol 103 (Advanced Cell Biology), Bio 105 (Advanced Molecular Biology) and Biol 200 (Proseminar). The remaining 3 courses can be in other areas. Areas are defined as structural biology, cell biology, developmental biology, immunology, molecular biology, neuroscience and genetics. Transfer credits may be applied towards no more than a maximum of two courses, and are decided on a case-by-case basis upon written petition to the Chair of the Graduate Committee. In no cases will transfer credit be applied to the mandatory courses.

Rotations: All first year students are required to register for the research rotations as Biol 300a,b. Every student is required to do at least **four** rotations of 9 weeks each in four different laboratories during the academic year. The choice of laboratory is made jointly by the student, and the faculty member in whose lab the rotation is to take place. Students may choose from faculty in the Departments of Biology, Biochemistry, Chemistry and Physics. After you arrive on campus we will ask you to list your top choices for rotations (after the faculty bazaar). We will then **assign** students to the first rotation. The other three rotations are the responsibility of the student to arrange with the appropriate faculty member. We recommend that you arrange for these rotations a few weeks prior to the end of the previous rotation to ensure that you can get a spot.

Biology students submit a written rotation report at the end of each rotation. One copy should be deposited at the Biology Office and one provided to the laboratory head in which the rotation was done.

Rotation Schedule:

	Start	End	Written Report Due
1 st	Tues. 09/01/09	Fri. 10/30/09	Mon. 11/02/09
2 nd	Mon. 11/02/09	Fri. 01/01/10	Mon. 01/04/10
3 rd	Mon. 01/04/10	Fri. 03/05/10	Mon. 03/08/10
4 th	Mon. 03/08/10	Fri. 05/07/10	Mon. 05/10/10

Thesis labs should be chosen between May 1st and May 12, 2010. In no cases should the choice of a thesis lab be discussed with faculty prior to these dates.

Journal Clubs: Every student is also required to register for and attend one Journal Club. Students supported on the training grants must choose from Journal Clubs approved by the Director of the Training Grant. For example, students on the Genetics training grant generally attend the Molecular Genetics Journal Club. In their first year the students should go to the journal club attended by the labs they are rotating in. Under these circumstances just pick one to register for and don't worry about any lack of correspondence between what you register for and what you attend. Students are not required to present an article until their second year.

The Journal Clubs are: (See course listings for times)

Molecular Genetics	Biol 305d
Neurobiology	Biol 306d
Immunology	Biol 307d
Structural Biology	Biol 310d

Wednesday Colloquia series: All students are required to attend the regular Wednesday seminars at 4:00 pm.

Graduate Student Research Seminars: (Biol 350d) All students are required to register for and attend these seminars which are held on Friday at 12:30 PM. Students do not present until their 3rd year.

Courses to register for:

FIRST YEAR: Students in their **first semester** (Fall 2009) will register for Rotations (Biol 300a), a Journal Club (Biol 305d to 310d), Research Seminar (Biol 350d), and two lecture courses – Biol 105 (Molecular Biology) and Biol 200a (Proseminar)

Students in **their second semester** (Spring 2010) should register as in the first semester except that one lecture course will be replaced by Biol 103 (Cell Biology) and the second by an elective of your choosing (see above). In addition, there is a required seminar in Ethics (Cont 300b).

Outside Research Proposition:

MCB students will submit and defend a research proposition at the end of the first year in the program. The Proseminar will serve to prepare you for this exercise. The subject should not be directly related to the projects you have worked on during the rotations. An abstract of the proposal outline is due to the Graduate Committee on April 2, 2010. Following approval by the Graduate Committee (by April 5, 2010) completed papers are due by April 21nd, 2010. The Committee will evaluate the choice of subject and will assign a committee of three faculty members who will evaluate your oral defense. The defenses will be held during the week of May 13-27, 2010. Reasons for exceptions should be submitted in writing to the Graduate Committee and are only granted under exceptional circumstances. Please contact Ruibao Ren with questions regarding the Outside exam (ren@brandeis.edu).

SECOND YEAR

Courses: Generally students take one lecture course in the fall and one in the spring semester.

Teaching: Each student is required to act as a teaching fellow for two semesters usually both semesters of their second year. Teaching assignments are made in the summer preceding the second year.

Second year PhD students are expected to attend the TF orientation on Wednesday, August 26th, 9:00 am – 3:30 pm, in Olin-Sang Auditorium.

Thesis Research:

Students will choose their thesis lab at the end of their first year between May 1st and May 12th. Students are expected to begin work on their thesis projects.

Graduate Student Research Seminars: (Biol 350d) All students are required to register for and attend these seminars which are held each Friday at 12:30 PM. Students do not present until their 3rd year.

Journal Clubs:

Every student is required to register for and attend one Journal Club. Students on the training grants must choose from Journal Clubs approved by the Director of the Training Grant. Students make their first presentations in their 2nd year.

Wednesday Seminar series:

All students are required to attend the regular seminars at 4:00 pm.

Thesis Research Proposition:

Each second year student must defend in the period of May 13-27, 2010. Written proposals should be handed into committee members a minimum of one week before the defense date. Petitions for extensions should be submitted in writing to the Graduate Committee and are only granted under exceptional circumstances. The examining committee is composed of three faculty members, and does not include the thesis supervisor. The thesis advisor is allowed to be present in the room during the exam, but only as a witness, i.e. they must remain silent during the process and their input is strictly prohibited. Faculty for the examining committee should be selected by the student in consultation with their thesis advisor. Two members of this committee plus the thesis advisor and a faculty member from a University other than Brandeis will compose the student's final thesis committee. Please contact Piali Sengupta with questions regarding the Inside exam (sengupta@brandeis.edu).

THIRD and Continuing Years

Thesis Research:

Students by this time are well into their thesis research projects.

Research Seminars:

Each student from their third year on must present a Friday Noon research seminar. The student should make sure that her/his committee attends the talk and meets with the student afterwards. All students must register and attend.

Journal Clubs: Every student is required to register for and attend one Journal Club. Students on the training grants must choose from Journal Clubs approved by the Director of the Training Grant.

Wednesday Seminar series:

All students **are required** to attend the regular Wednesday seminars at 4:00 pm.

Thesis Committee:

Once thesis work has begun, **each student is required** to meet at least once a year with his/her thesis committee. These meetings should be arranged in advance by the student soon after the student's presentation at the Friday Research Seminar series. After the meeting, the committee will submit a report summarizing the student's progress, identifying possible problems, and any recommendations. Graduating students **are required** to have these yearly reports in their files.

Thesis requirements:

Ph.D. thesis requirements are set by the student's advisor and the thesis Committee. As a rough guideline, Ph.D. students are expected to have a minimum of two first-author papers accepted or published in quality journals at the time of their thesis defense.

Thesis Seminar: Each student is required to give a thesis seminar upon completion of their dissertation. It is usual to give this prior to the thesis defense.

QUESTIONS

If you have questions you can contact a member of the graduate committee.

Susan Birren	birren@brandeis.edu
Ruibao Ren	ren@brandeis.edu
Piali Sengupta	sengupta@brandeis.edu
Bruce Goode	goode@brandeis.edu
Paul Garrity	pgarrity@brandeis.edu
Daniele Nicastro	nicastro@brandeis.edu

The following senior graduate students have also agreed to answer questions:

Sara Wasserman	smwasser@brandeis.edu
Wade Hicks	whicks@brandeis.edu
Melissa Chesarone	melissac@brandeis.edu

EVALUATION PROCEDURES FOR GRADUATE STUDENTS IN MOLECULAR AND CELL BIOLOGY

- YEAR 1:** The students must complete their formal courses with a grade of B- or better. Each of four required rotations is evaluated by its supervisor who submits a brief written report on the student's performance in the lab. The written lab reports are **reviewed by the rotation adviser and by the graduate committee.** Students must also successfully write and defend the Outside Proposition at the end of the first year. Progress made in the 1st yr is evaluated by the Grad Committee.
- YEAR 2:** Grades in formal courses must be B- or better. Students submit their thesis research proposal in writing. They are examined orally by a panel of three faculty members who subsequently serve as the thesis committee. The committee submits a report in writing. Progress made in the 2nd yr is evaluated by the Grad Committee.
- YEAR 3 and on:** Each student presents a research talk sometime during the year. The student's thesis committee meets following the talk to evaluate the student's progress and submits a brief written report. Students are required to hold at least one thesis committee meeting per year, but meetings may be held more frequently at the discretion of the thesis committee.
- THESIS:** The student submits the completed thesis, gives a seminar, and is examined by a panel of at least three faculty members including one from outside the university.

GRADUATE TEACHING ASSISTANTS IN MOLECULAR AND CELL BIOLOGY

ASSIGNMENTS

Over the course of graduate study, each Ph.D. student is required to teach 2 undergraduate sections, courses, or labs.

TF assignments are made by the decision of an interdepartmental graduate committee on the basis of faculty request/enrollment/and graduate student experience.

In all cases, an attempt will be made to inform graduate teaching assistants of their assignments during the summer prior to the commencement of teaching responsibilities. In cases of unexpected enrollment shifts, cancellation or addition of courses, or inequities in work loads, assignments may be changed with little notice. If there is a likelihood that such a change will be made, the graduate committee will notify the teaching assistants concerned as soon as possible to permit ample preparation time.

Only in exceptional circumstances do graduate students teach their own courses.

RESPONSIBILITIES

When the assignment is made, or at the beginning of the term, graduate teaching assistants and faculty members will discuss course requirements, attendance policies and the range of graduate responsibilities (in class, outside the classroom, administrative duties, technical assistance, e.g., running a projector, etc.).

In order to encourage an open, cooperative relationship between the graduate teaching assistant and faculty member, meetings will be held on a regular basis to discuss the progress of the course.

The teaching fellow and faculty member will consult on any problem arising in the course as soon as possible so that the faculty member and graduate student can cooperate in addressing it.

If graduate teaching assistants are to grade undergraduate papers or exams, the faculty member and TF will discuss the number of assignments, grading procedures and standards (letter grade/pass, fail/comments only, grading in pencil, expectations for student writing ability) and an expected range of grades.

Graduate teaching assistants are required to hold at least 2 weekly office hours, usually in the evenings.

Graduate teaching fellows are seldom asked to tutor students requiring additional help. If tutoring is expected and 1 hour/week is insufficient to address difficulties in the course, the graduate student will refer the problem to the professor and if necessary (and agreed upon) to the appropriate agency on campus for additional assistance.

Faculty members will advise graduate teaching fellow on policies for academic honesty and sexual harassment at the beginning of the term at which time procedures for alerting the proper university officers and dealing with such matters will be agreed upon.

EVALUATION/OVERSIGHT/PROFESSIONAL DEVELOPMENT

Graduate teaching fellow are encouraged to discuss teaching with the professor or with a member of the graduate committee.

Graduate teaching fellow are expected to consult teaching materials available at the Office of the Dean of Arts and Sciences and to attend teaching seminars sponsored by the Graduate School.

Faculty should evaluate graduate teaching fellows performance and provide written comments documenting the teaching experience and teaching fellows development over the course of the semester.

Every attempt should be made to resolve difficulties between graduate teaching fellows and faculty members involved. If such resolution is impossible, official grievances should be made per the stated procedures in the student handbook.

Graduate teaching fellows are encouraged to document teaching experiences for future job searches. Faculty members should agree to provide letters of reference for teaching which will be included in the student's departmental file.

REQUIREMENTS FOR MASTER'S STUDENTS

Summary of requirements for candidacy to the Ph.D. program:

All MCB Masters students must complete 6 graduate level courses, including a research-based course. Students should also participate in appropriate Journal Clubs and seminar series. In addition, all Masters students must register for and attend Ethical Practice in Health-Related Sciences (Cont 300b), which is a not for credit course.

Courses: A total of six graduate-level courses, which must include BIOL 103b (Mechanism of Cell Functions), BIOL 101a (Molecular Biotechnology), and one laboratory or research based course, with the balance to be agreed upon with Susan Birren, the program adviser, are required for the degree. BIOL 105b (Molecular Biology), may be taken in lieu of BIOL 101a with the permission of the program adviser. The laboratory or research component can be met by BIOL 300a or b (Biological Research Rotations), BIOL 155a (Project Laboratory in Genetics and Genomics), BIOL 298a (Readings in Molecular and Cell Biology), or BIOL 299a (Master's Research Project, and is typically taken in the spring. All students are required to take CONT 300b (Ethical Practice in Health-Related Sciences), usually offered in the spring. In general, transfer credit is not accepted for the Master's Program.

Rotations: Rotations, usually in the Spring semester are one option to fulfill the research requirement of the Masters degree. Students who choose to do rotations should register for Biol 300a or b. The choice of laboratory is made jointly by the student, and the faculty member in whose lab the rotation is to take place. Students may choose from faculty in the Departments of Biology, Biochemistry, Chemistry and Physics. It is the responsibility of the student to arrange the rotation with the appropriate faculty member. We recommend that you arrange for these rotations a few weeks before the start date to ensure that you can get a spot.

Biology students submit a written rotation report at the end of each rotation. One copy should be deposited at the Biology Office and one provided to the laboratory head in which the rotation was done.

Rotation Schedule:

	Start	End	Written Report Due
1 st	Tucs. 09/01/09	Fri. 10/30/09	Mon. 11/02/09
2 nd	Mon. 11/02/09	Fri. 01/01/10	Mon. 01/04/10
3 rd	Mon. 01/04/10	Fri. 03/05/10	Mon. 03/08/10
4 th	Mon. 03/08/10	Fri. 05/07/10	Mon. 05/10/10

Journal Clubs: Students should register for and attend one Journal Club. Masters students are not required to present an article for Journal Club.

The Journal Clubs are: (See course listings for times)

Molecular Genetics	Biol 305d
Neurobiology	Biol 306d
Immunology	Biol 307d

Wednesday Colloquia series: All students are required to attend the regular Wednesday seminars at 4:00 pm.

Graduate Student Research Seminars: (Biol 350d) All students are required to register for and attend these seminars which are held on Friday at 12:30 PM. Masters students are not required to present their research.

Courses to register for:

Students in their **first semester** (Fall 2008) will register for a Journal Club (Biol 305d to 310d), Research Seminar (Biol 350d), and three lecture courses – Biol 101a (Molecular Biotechnology) and two courses to be agreed upon with the Program Advisor.

Students in **their second semester** (Spring 2009) should register for Biol 103b (Mechanism of Cell Functions), a second lecture course of your choosing and a research-based course as described above. In addition, there is a required seminar in Ethics (Cont 300b).

Progress: Students' progress will be reviewed by the graduate committee and Dr. Birren at the end of the first semester. Students must complete all courses with a grade of B- or better and may be terminated at the end of the first semester if the student's record is unsatisfactory. Students wishing to be admitted to a second year of study must demonstrate adequate progress.

SIX LIFE SCIENCES GRADUATE COURSES

One of which must be a proseminar. Normally this will be done at a rate of three courses per semester for two semesters. Courses outside the life sciences will be considered on a case by case basis. Students must receive a grade of B- or better in each of the six courses.

RESEARCH REQUIREMENT:

There are two options for completion of the research requirement: 1) Four 9 week rotations (See rotation schedule on page 1 of handbook). A written report will be submitted after each rotation. 2) Master's Thesis. The student carries out a 2 semester project in a single lab and submits a thesis.

Students should find a research advisor for the thesis in the 1st rotation as soon as possible on arriving. The best way of doing this is to define a list of potential advisors using the graduate bulletin as a starting point, then calling or emailing and speaking with the professors. The Biology office has two graduate bulletins for you to look through, but please do not remove these from the office. Dr. Susan Birren is available to speak with you if you are having trouble defining your area of interest at x62680. Research should commence as soon as possible

PARTICIPATION IN DEPARTMENTAL EVENTS:

Master's students should attend a journal club, preferably the one most closely related to the student's research area. In addition, students should attend the Friday noon graduate student talks and the Wednesday joint seminar.

PROGRESS

Students progress will be reviewed by the graduate committee and Dr. Birren. Students must demonstrate adequate progress to be admitted to a second year of study should that be necessary.