## Table of Contents

- **WELCOME!** .......................................................... 4
- **ADMINISTRATIVE MATTERS** ........................................... 4
  - Student ID Card ......................................................... 4
  - Establishing Residency ............................................... 4
  - Keys ........................................................................ 4
  - Calmail ...................................................................... 4
  - The Graduate Lounge .................................................. 5
  - UC Berkeley Academic Calendar .................................. 5
- **DEPARTMENTAL SERVICES/ SUPPORT** ................................ 5
  - Graduate Office ........................................................ 5
  - Payroll ..................................................................... 5
  - Purchasing/Receiving ................................................... 5
  - Building .................................................................... 5
  - Hazardous waste disposal .......................................... 6
  - ePMB ......................................................................... 6
  - Mail .......................................................................... 6
  - Photocopying & Faxes .................................................. 6
  - A note regarding security ............................................. 6
- **COMPENSATION** ......................................................... 6
  - GSR & GSIs .............................................................. 6
    - Payroll .................................................................. 7
  - Student Awards ......................................................... 7
  - Fellowship Supplementation ....................................... 8
  - Other Opportunities ................................................... 8
- **Life as a First Year** ....................................................... 8
  - Selecting classes ....................................................... 9
  - Registration ............................................................. 9
  - Requirements .......................................................... 9
  - Checklists .................................................................. 11
  - Rotations .................................................................... 13
  - Choosing Labs .......................................................... 13
- **Life as a Second Year** .................................................... 13
  - Teaching .................................................................... 14
  - Qualifying Exam ....................................................... 14
  - Advancing to Candidacy .............................................. 15
- **Life as a Third Year & Beyond** ......................................... 16
  - Annual Committee Meetings ....................................... 16
  - Leaving with a Master's Degree ................................... 16
  - Finishing ..................................................................... 16
- **INTERNATIONAL STUDENTS** ......................................... 16
  - Berkeley International Office (BIO) ......................... 16
  - Glacier Tax Compliance System ................................. 17
  - International House at UC Berkeley ......................... 17
  - Test of Spoken English (TSE) ..................................... 17
- **THE PLANT GENE EXPRESSION CENTER (PGEC)** ................. 17
What is the PGEC? ............................................................................................................................. 18
The PGEC Seminar Series .................................................................................................................... 18
Rotations, classes and teaching ........................................................................................................... 18

TRANSPORTATION ............................................................................................................................. 18
Campus Parking Permits ..................................................................................................................... 18
Class Pass .......................................................................................................................................... 18
Bear Transit—Campus Shuttles ........................................................................................................... 19
Bay Area Rapid Transit (BART) ................................................................................................ ........ 19
Bicycles ............................................................................................................................................. 19
Residential Parking ............................................................................................................................ 19

UNIVERSITY SERVICES ..................................................................................................................... 19
Medical Care ....................................................................................................................................... 19
Health Insurance ................................................................................................................................. 20
Dental Insurance ................................................................................................................................. 20
Child Care ......................................................................................................................................... 20

FREQUENTLY USED UCB PHONE NUMBERS & WEBSITES ................................................ 21
RESOURCES FOR GRADUATE STUDENTS ...................................................................................... 22
WELCOME!

Welcome to the University of California at Berkeley! Berkeley is renowned worldwide for the distinction of its faculty and students, the scope of its research and publications, and the quality of its libraries and facilities. We are happy to have you join us in PMB and look forward to helping you meet your educational and research goals. Please feel free to stop by the office with any questions or concerns. The PMB Administrative office is located in 111 Koshland Hall. The Graduate Student Affairs Office is located in 111C. You can find Rocio Sanchez, your Staff Graduate Advisor, there. You can also contact Graduate Affairs anytime at rocio_s@berkeley.edu or (510) 642-5167.

ADMINISTRATIVE MATTERS

Student ID Card
All students must have a Cal Photo ID card. This is your official student identification and is required for campus services such as the libraries and the Recreational Sports Facility (RSF). The first ID is free; replacement cards cost $25. To get your picture taken and pick up your ID, stop by the Cal Photo ID office or visit their website: www.housing.berkeley.edu/photoid/welcome.html; M-F, 9am-5pm; 110 Cesar Chavez Student Center; 643-6839.

Establishing California Residency
This is extremely important! Do Not Delay! The department expects you to establish California residency if you are not an international student. We expect that out-of-state students will become California residents after their first year at Berkeley. The department will not pay out-of-state tuition fees after the first year. A little time spent now, organizing records, will save you a lot of trouble later. The State of California will want evidence that you have been living here for a year, and that you have moved out of your previous state. You must have the appropriate documentation for proof. Here is a list of important steps to take right away when you move to California:

1. Register to Vote
2. Obtain a California Driver’s License (You can accomplish #1 and #2 at the DMV)
3. Set up a bank account here and close your old account from your previous state

Consult the residency website for more information: http://registrar.berkeley.edu/Residency/establish.html.

Keys
Koshland Hall is unlocked from 7:30 am to 5:00 p.m, Monday through Friday. At all other times, you will need to swipe your student ID card by the reader near an entrance in order to get in. Depending on where you rotate, you may also be assigned a 6 digit code that will allow you access to a lab or other rooms in the building. Tony Gamez in 54 Mulford handles access issues. You can contact him at gamez32@berkeley.edu or 643-5252.

Calmail
The University provides Calmail accounts, free e-mail, to all current UC Berkeley students, faculty, and staff. Go to https://calmail.berkeley.edu/ to create a Calmail account or change your Calmail password. You will need your Student ID number to create your account.
The Graduate Student Lounge (Grad Pad)
The Graduate Student lounge is in Koshland 374 and is more frequently referred to as the Grad Pad. It will serve as your “home base” for your first year while you are doing rotations. It contains two computers for your use, a conference table for study groups, a limited kitchen, and a couple leather couches. Please enjoy and remember to keep it clean. The grad pad access code is 844842. Please do not share this with anyone that is not a PMB graduate student.

UC Berkeley Academic Calendar
It is important to be informed of different administrative deadlines, especially as they pertain to financial and academic matters. For updated calendar information on the current school year, visit http://registrar.berkeley.edu/current_students/registration_enrollment/stucal.html and/or http://opa.vcbf.berkeley.edu/AcademicCalendar/calendar.cfm

DEPARTMENTAL SERVICES/ SUPPORT
Below is a summary of support staff and services you will find helpful during your graduate career at PMB.

Graduate Office
Rocio Sanchez is the Staff Graduate Advisor for the Department of Plant and Microbial Biology. She will help you find your way successfully through the maze of the University bureaucracy and answer all your questions about the department and your graduate career. Don’t hesitate to contact her or just stop in for a chat.

Rocio Sanchez, 510-642-5167, rocio_s@berkeley.edu

Payroll
You will want to be aware of the Human Resources team: Enrique Vallejo (HR – enrique@berkeley.edu, 642-3039, 110 Giannini) and Elena Dumalag (Payroll – edumalag@berkeley.edu, 642-2915, 140 Giannini). They will help you complete the necessary paperwork so you can get paid! Please contact Rocio in the Graduate Office first with your problems as all graduate funding matters run through the Graduate Office. Please note that GSRs and GSIs do not need to submit monthly timesheets.

Purchasing/Receiving
Nikki Groen, Purchasing Officer, arranges for most purchasing requests for labs. Her office also coordinates receiving of all purchasing and express mail deliveries. The Purchasing/Receiving office is in 54 Mulford. Your connection to Nikki and her office will become more important after you are settled in your lab.

Building
Structural, plumbing, electrical, and other sorts of mechanical problems can be reported to Harvey Jackson, Building Coordinator for the department (harveyj@berkeley.edu, 642-2606). Harvey also coordinates building safety, security and evacuation efforts for the entire department. In conjunction with Harvey’s office, each lab has a safety officer who will inform you of evacuation protocols and provide you with more details regarding lab safety.
Hazardous waste disposal
Weekly hazardous waste pickups are handled by the office of Environment, Health and Safety (EH&S, 2-3073). Harvey Jackson or your lab safety officer can tell you where to dispose of hazardous materials.

ePMB
ePMB is the department intranet at http://epmb.berkeley.edu. Many departmental functions are currently processed through ePMB. You access it by using your Calnet ID and password.

Mail
Mailboxes reserved for first year and non-Koshland Hall graduate students are located in 111 Koshland Hall. Your on-campus mailing address is as follows:

[Your Name], Graduate Student
Department of Plant and Microbial Biology
111 Koshland Hall # 3102
University of California
Berkeley, CA 94720-3102

Photocopying & Faxes
You are allowed to use the departmental fax and copy machines for department related matters. Both the fax and photocopy machines require an access code to operate. During your rotation year, you will have a special access code assigned to all first-year graduate students. The first-year access code is 60220. After your first year, you will be working in and associated to a single lab. The lab you will be assigned to should supply you with their lab fax and copy access codes.

For classes that require a high quantity of photocopying, a specific access code is given for course purposes. Ask the teaching professor, Nikki Groen, or Rocio Sanchez for the code. Avoid photocopying class handouts on your lab’s copy code because it may be funded by your PIs grant.

A note regarding security
Due to the location of Koshland Hall at the perimeter of the campus, criminals find this building particularly enticing. Most labs have desks with locks for securing personal possessions. Bikes can be locked indoors in the bike cages, however, you should continue to personally lock your bike. If you are working late at night, keep the lab doors locked. Also, do NOT let anyone into the building after hours! If a person is authorized to be in the building they should have a key. For your safety, when walking alone use the on-campus escort service. Please call the safety escort service at 2-WALK (2-9255).

COMPENSATION

Getting Paid
All incoming graduate students are guaranteed 5 years of full support as long as you make satisfactory academic progress. Compensation matters are coordinated through the Graduate Office in conjunction with the CNR Human Resources Office. You will be paid either via payroll, student awards or a combination of both. Consult with the Graduate Office in regards to how you are
specifically paid. **You must be enrolled in 12 units before your payroll or student award can be processed.**

**Graduate Student Researcher (GSR)**
Research assistantships are the common means of support for graduate students for those terms in which they do not hold a GSI appointment. GSRs perform research broadly related to their degree programs under the direction of a faculty member or authorized Principal Investigator. Research project(s) constitutes the dissertation work done by the student to obtain a Ph.D. degree. The wages for a GSR generally comes from contract or grant funds; hence, it is necessary that a student supported as a GSR pick a research topic that carries such funds.

**Graduate Student Instructor (GSI)**
The general duties of a graduate student instructor (GSI) are to aid in the instruction, conduct, and grading of a course. Normally this will involve attending the lectures for the course, setting aside 2 or 3 hours per week for consultation with students in the course, leading discussions sections or lab instruction, and assisting in the development and grading of homework problems and quizzes. The department regards experience as a GSI to be highly valuable to a student whether or not a teaching career is chosen. Because of this, we require that all Ph.D. candidates serve as a GSI for a total of 2 semesters during their graduate studies (usually in their 2nd and 3rd years).

**Payroll**
GSR, GSI, Reader wages are disbursed through the payroll system. If appointed as a GSR, GSI, or Reader, you will be paid on the first of the following month. For example, your paycheck for August will be available on September 1 (or the last workday before September 1). On occasion, the payroll system can have problems. Therefore, be sure to respond promptly to any requests from the Grad Office, Payroll, or HR and promptly report any paycheck you perceive to be late or wrong. Sign up for Direct Deposit by logging onto [http://blu.berkeley.edu](http://blu.berkeley.edu) and sign up under the “People” tab.

**Student Awards**
Many student awards are disbursed through the Departmental Student Award System (DSAS). This system includes payments for University fellowships, block grants, special stipends, travel awards, and outside awards and fellowships. Pay dates can be sporadic but you will notice a pattern once payments begin. **Important:** Unless you are an international student, taxes are not withheld from these payments even though the federal government expects you to pay taxes on this income. You will not receive a W-2 form for this compensation as these awards are not wages. You must keep track of your compensation. Sign up for Direct Deposit here (this is different than direct deposit for payroll): [http://eftstudent.berkeley.edu/](http://eftstudent.berkeley.edu/)

Your stipend for the 2011-2012 Academic Year is $28,000. Unless you have a fellowship that pays in lump sums, you will most likely be receiving $2,333 per month starting in August (paid September 1).
Fellowship Supplementation for External, Competitive Fellowships

A student receiving an external, competitive fellowship has the potential to receive income greater than the standard PMB stipend. Opportunities for grants and fellowships will be communicated to you throughout the year. You can also search for them at http://www.grad.berkeley.edu/fellowships/index.shtml.

The supplementation policy is subject to change and the department must comply with the terms and conditions set by the fellowship granting agency before being able to determine any supplement.

NSF fellows:
- Receive a one-time department stipend of $2K
- Additional earnings may be received if a student fellow were to be a GSI while on fellowship tenure.
- Continue to be required to GSI twice

Other external fellowship recipients:
- If the fellowship is below the standard PMB stipend level, the department or PI will supplement the fellowship to bring up to the PMB stipend level and pay registration or health fees not covered by the fellowship
- Additional earnings may be received if a student fellow were to be a GSI while on fellowship tenure. Any GSI wages will count towards bringing up to the PMB stipend level.
- Continue to be required to GSI twice

Other Opportunities

The PMB department provides one $500 travel grant per student during your time here. You can apply for a travel grant year round. To be eligible you must be traveling to a conference or other event at which you will be presenting research in some format. You will be sent instructions on how to apply via email and you can also contact Rocio Sanchez for details.

Reader positions are often available each semester. As a reader you will assist Faculty instructors in a course correcting exams, grading homework, and other non-teaching tasks. It currently pays approximately $12.42 per hour. Positions will be advertised via email at the beginning of each semester.

Life as a First Year

This section provides an overview regarding requirements, rotations, and choosing labs; in brief, this section gives information about many of the academic decisions you should expect to encounter as a first year graduate student. There is an orientation for new graduate students prior to the start classes, to answer any remaining questions and thoroughly prepare you for starting your program of study. If you want some very heavy reading consult the Guide to Graduate Policy found here: http://www.grad.berkeley.edu/policies/guide.shtml. It contains the overriding policy for all of PMB’s internal policies.
Selecting classes
During orientation, Pat Zambrisky, the Head Graduate Advisor, will look at your previous coursework and tell you if she recommends additional coursework for you (beyond the usual requirements that are listed later in the guide). You may also want to talk with fellow graduate students for additional advice on courses. The Graduate Office can also answer many of the questions you may have about the process. Finally, it is a good idea to sit in on a few classes during the first week of instruction, to further learn if the course suits your academic plan.

Registration
Adding, dropping and changing courses can all be accomplished through Tele-Bears (http://telebears.berkeley.edu), the online registration system. You will need to know the Course Control Number (CCN) for the classes you wish to enroll. These are available in the Online Schedule of Classes, which can be accessed online at http://schedule.berkeley.edu/. Information about seminars and CCNs for research units with individual faculty will be emailed every semester by the Graduate Office. You are able to drop courses without penalty up until the end of the 3rd week of the semester. The Graduate Office is able to drop you from courses after the 3rd week until the last day of instruction.

Requirements
You are required to take the following courses:

<table>
<thead>
<tr>
<th>Plant Biology, PhD</th>
<th>Microbiology, PhD</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMB 200A: Plant Developmental Genetics</td>
<td>PMB 220A: Microbial Genetics</td>
</tr>
<tr>
<td>PMB 200B: Genomics and Computational Biology</td>
<td>PMB 220B: Genomics and Computational Biology</td>
</tr>
<tr>
<td>PMB 200C: Plant Diversity and Evolution</td>
<td>PMB 220C: Microbial Diversity and Evolution</td>
</tr>
<tr>
<td>PMB 200D: Plant Cell Biology</td>
<td>PMB 220D: Cell Structure and Function</td>
</tr>
<tr>
<td>PMB 200E: Plant Biochemistry</td>
<td>PMB 220E: Microbial Physiology</td>
</tr>
<tr>
<td>PMB 200F: Plant Systems Biology</td>
<td>PMB 220F: Microbial Ecology</td>
</tr>
<tr>
<td>PMB 201: Faculty Research Review</td>
<td>PMB 202: Faculty Research Review</td>
</tr>
<tr>
<td>PMB 210: Scientific Reasoning and Logic</td>
<td>PMB 210: Scientific Reasoning and Logic</td>
</tr>
<tr>
<td>PMB 300: Workshop on Teaching</td>
<td>PMB 300: Workshop on Teaching</td>
</tr>
<tr>
<td>PMB 290 (or equivalent): Seminars (Take 2)</td>
<td>PMB 290 (or equivalent): Seminar (Take 2)</td>
</tr>
<tr>
<td>PMB 298: Department Colloquium</td>
<td>PMB 298: Dept. Colloquium</td>
</tr>
<tr>
<td>PMB 299: Graduate Research</td>
<td>PMB 299: Graduate Research</td>
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</tbody>
</table>

Given the few course requirements, the number of courses you take is up to you and your PI. Most of the courses are completed by the end of your first year. You are required to sign up for PMB 298 (Department Colloquium) every semester. The remaining units of your 12 unit course load requirement will be filled up with PMB 299: Graduate Research. The CCNs for PMB 299 will be sent to you prior to the start of each semester and correspond either to the Head Graduate Advisor or to your Faculty Advisor.

If you have a weak background in a certain area, you may consider taking an undergraduate course that addresses that area during your first year. The Head Graduate Advisor may also suggest a course based on your background as well. For a list of undergraduate level courses offered, please
consult the course catalog (http://sis.berkeley.edu/catalog/gcc_search_menu) and the online schedule of classes (http://schedule.berkeley.edu/).

The Faculty Research Review (PMB 201 and PMB 202) meets Tuesday through Thursday from 4-6 and consists of faculty in the two programs presenting their research for one hour. Not all dates are filled. Tuesday is targeted at Plant Biology students. Wednesday is targeted at both Microbiology and Plant students and Thursday is targeted at Microbiology students. Students are emailed a link to the online schedule for the Faculty Research Review.

Seminar courses offered outside of the department may be of particular interest and/or value to your academic plan. Seminars change from semester to semester and are not often listed in the schedule of classes. You should visit or contact the Graduate Office at the beginning of the semester for a listing of seminars offered. Relevant seminars from other departments count toward the seminar requirement.

The next two pages contain program checklists to help keep track of requirements.
# Plant Biology - PhD Checklist

## REQUIRED COURSEWORK

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMB 200A</td>
<td>Plant Developmental Genetics</td>
</tr>
<tr>
<td>PMB 200B</td>
<td>Genomics and Computational Biology</td>
</tr>
<tr>
<td>PMB 200C</td>
<td>Plant Diversity and Evolution</td>
</tr>
<tr>
<td>PMB 200D</td>
<td>Plant Cell Biology</td>
</tr>
<tr>
<td>PMB 200E</td>
<td>Plant Biochemistry</td>
</tr>
<tr>
<td>PMB 200F</td>
<td>Plant Systems Biology</td>
</tr>
<tr>
<td>PMB 210</td>
<td>Scientific Reasoning and Logic</td>
</tr>
<tr>
<td>PMB 201</td>
<td>Faculty Research Review (Profs on Parade)</td>
</tr>
<tr>
<td>PMB 300</td>
<td>Workshop on Teaching (required before or concurrently with first semester of teaching.)</td>
</tr>
<tr>
<td>Seminar #1</td>
<td>(PMB 290 or similar, PMB 298 does not count)</td>
</tr>
<tr>
<td>Seminar #2</td>
<td>(PMB 290 or similar, PMB 298 does not count)</td>
</tr>
</tbody>
</table>

*Although not technically a degree requirement, all students should sign up for PMB 298 (Barker seminar) and PMB 299 (Research Units) every semester.*

## TEACHING

| Semester #1 | (usually an introductory biology class, i.e. large class) |
| Semester #2 | (usually an upper division science class, i.e. small class) |

## OTHER

<table>
<thead>
<tr>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three Lab Rotations &amp; Permanent Lab Placement</td>
</tr>
<tr>
<td>Qualifying Exam</td>
</tr>
<tr>
<td>Advancement to Candidacy</td>
</tr>
<tr>
<td>Other Requirements</td>
</tr>
<tr>
<td>Final Report</td>
</tr>
<tr>
<td>File Dissertation</td>
</tr>
</tbody>
</table>

*Although not technically degree requirements, all students are expected to hold yearly thesis committee meetings after advancing to candidacy and have a Ph.D. finishing talk. There is no dissertation defense requirement.*
Microbiology - PhD Checklist

REQUIRED COURSEWORK

___ PMB 220A – Microbial Genetics
___ PMB 220B – Genomics and Computational Biology
___ PMB 220C – Microbial Diversity and Evolution
___ PMB 220D – Cell Structure and Function
___ PMB 220E – Microbial Physiology
___ PMB 220F – Microbial Ecology
___ PMB 210 – Scientific Reasoning and Logic
___ PMB 202 – Faculty Research Review (Profs on Parade)
___ PMB 300 – Workshop on Teaching (required before or concurrently with first semester of teaching.)
___ Seminar #1 (PMB 290 or similar, PMB 298 does not count)
___ Seminar #2 (PMB 290 or similar, PMB 298 does not count)

*All students are to sign up for PMB 298 (Barker seminar) and PMB 299 (Research Units) every semester.

TEACHING

___ Semester #1 (usually an introductory biology class, i.e. large class)
___ Semester #2 (usually an upper division science class, i.e. small class)

OTHER

___ Three Lab Rotations & Permanent Lab Placement
___ Qualifying Exam
___ Advancement to Candidacy

___ Other Requirements – After the first year review and/or your qualifying exam, the faculty may choose to either recommend or require other courses or experiences necessary for the completion of your degree. Your final report will not be submitted until these requirements are finished.

___ Final Report – The department files this report with the Graduate Division certifying that you have completed all degree requirements except for filing your dissertation.

___ File Dissertation

*Although not technically degree requirements, all students are expected to hold yearly thesis committee meetings after advancing to candidacy and have a Ph.D. finishing talk. There is no dissertation defense requirement.
Rotations
The PMB department requires students to perform three ten-week rotations. A fourth rotation is possible if necessary. The department will work with you throughout the summer to set your initial rotation, although the onus is mostly on the student to make arrangements with Faculty members directly. Faculty members will expect that you will contact them about rotations before you arrive and throughout the year. The Faculty Research Review and initial Fall Department Retreat are meant to help you make decisions regarding which labs you would like to work in.

Here is the rotation schedule for 2011-2012:

1st Rotation: Sept. 6 - Nov. 1
2nd Rotation: Nov. 14 - Feb. 3
3rd Rotation: Feb. 6 - April 20
4th Rotation (optional): April 23 - June 29

Permanent Lab decisions are due: Friday, April 27 at noon!

Choosing Labs
After a year of rotations, you will have an idea of the PIs you like, the kind of lab atmosphere you most appreciate, and the areas you are most interested in studying. The first step in choosing the lab that is right for you is to outline clearly which factors are the most important to you and then proceed to narrow your choice. Below are factors to consider.

1. Which PIs are working in the field that interests you?
2. How many people are in the lab? What lab size do you prefer?
3. What are the lab’s resources?
4. What is the reputation of the lab?
5. Is the PI interested in helping you find your own project or does he/she seem to want to steer your work in the direction of his/her interests? Is this what you want?
6. From where does that lab receive most of its funding?
7. What does the PI expect from you as a graduate student and how will you relate with the other people in the lab?

The next step is to speak with the PI about working in his/her lab. Be sure to discuss lab space as well as funding, including what kind of financial support you will receive beyond guaranteed funding. Ask what the PI’s expectations are in terms of time spent in the lab, when the qualifying exam should be taken, etc. Clearing up these questions before entering a lab will make you more confident of your decision.

While students are free to express an interest in any particular laboratory at any time, it is not permissible to seek a firm commitment about a position in a laboratory prior to the completion of all three rotations. Likewise, it is not permissible for a faculty member to make a firm commitment to any student prior to the completion of all three rotation periods.

Life as a Second Year
Teaching

Students are likely to be a Graduate Student Instructor (GSI) during one of the two semesters of their second year. Students are required to teach twice prior to graduation and must teach two different types of classes in order to fulfill the requirement. Second year students usually teach lab or discussion sections of large undergraduate courses, primarily Biology 1A and Biology 1B. Application information is available in April of each year. Announcements with application information will be sent via email. Instructions may require students to fill out applications in multiple departments.

If so inclined, students may teach two semesters in their second year. Generally, teaching positions are more difficult to get in the Fall as more graduate students want to teach in the Fall and take their Qualifying Exam in the Spring. Be aware that you are not guaranteed a teaching position in your second year. It is the student’s responsibility to acquire a teaching position.

Qualifying Exam

All students are expected to take the qualifying exam by the end of the second year and advance to Ph.D candidacy before the beginning of the third year.

The Qualifying Examination assesses the candidate's broad knowledge of microbial biology or plant biology and determines in-depth knowledge in the proposed area of research. The examination consists of a dialog between the student and the examiners to provide a forum for the student to demonstrate an ability to integrate and extrapolate from information obtained in the classroom and laboratory. The examination provides a way to evaluate the student's preparation and potential for a research or teaching career at the professorial level. It stresses breadth, depth, and sophistication of knowledge. During the examination the student will demonstrate:

1. Mastery of a significant body of relevant knowledge
2. The capacity to think and write critically
3. The ability to apply information learned in the classroom and laboratory to the solution of relevant biological problems.

The student normally takes the Qualifying Examination in the third or fourth semester. The student, in consultation with the Head Graduate Advisor, will recommend a four-member Examination Committee, approved by the Graduate Division, consisting of a chair, two inside members, and an outside member. The chair and first inside member are faculty members from within your program. The second inside member may be someone from inside the program or someone else with relevant knowledge. The outside member cannot be from your program, must be on the Academic Senate, and serves as the representative of the Graduate Division to ensure the integrity of the exam. Plant Biology students can consult the faculty list on the PMB site: http://pmb.berkeley.edu/faculty/directory/all. Microbiology students can consult the Faculty list on the GGM site: http://pmb.berkeley.edu/ggm/faculty. Adjunct Professors may serve as members of the committee, by exception, but not as chairs or outside members. Non-Senate members and faculty from other campuses may serve upon approval of the Head Graduate Advisor and Dean of the Graduate Division.

The Qualifying Exam application can be found here: http://www.grad.berkeley.edu/policies/forms.shtml. You must turn it in at least 4-5 weeks prior to
the examination. Be sure to let Rocío in the Graduate Office know when the exam is occurring so that she may prepare the proper paperwork.

No later than one week before the examination the candidate will prepare and deliver to the committee two research proposals, both of the scope and caliber appropriate for doctoral dissertation research. The student develops the topics of both the major and minor proposals in consultation with the Examination Committee Chair. To focus questioning in the candidate's proposed research area, the major proposal, in 5-7 single spaced pages, should address the specific topic proposed for thesis research. To provide a starting point for questioning across the breadth of microbial biology, the minor proposal, in 3-5 single spaced pages, should address a specific topic in a field that differs significantly in biological system and approach from that of the candidate's proposed dissertation research. The proposals serve as the basis for the oral examination, but do not limit it.

The student, in consultation with their Research Advisor and Graduate Advisors, should ensure that the Examination Committee composition permits it to assess knowledge in both areas covered by the proposals. Any examiner may ask questions in any subject area. Thus, we strongly recommend that the student meet with each committee member before the examination. The professor and student may choose to focus on topics within a particular subject area and may meet regularly to discuss these topics. As long as the committee adequately assesses the student's broad knowledge of microbial biology or plant biology, the committee may discuss additional areas by mutual agreement between the student and the examiners.

The oral examination will last approximately 3 hours. Approximately one-third of the Examination covers the major proposal, with the remaining time allocated to the breadth of microbiology or plant biology and the minor proposal. Students may choose to prepare power point slides for the exam. If so, students should limit the number of slides to 15 slides for the major proposal and 10 slides for the minor proposal. Passing the Qualifying Examination requires a unanimous vote of the Committee.

**Advancing to Candidacy**

After you pass your qualifying exam, you are eligible to advance to Ph.D. candidacy. This involves selecting a dissertation/thesis committee, filling out a form, and submitting this along with a check for $90 to the Grad Division. The form has to be in no later than the day before the beginning of the semester in which you are to be advanced to candidacy. As an incentive, the department will reimburse you for the $90 candidacy fee as long as you file before the beginning of your third year.

Your thesis committee consists of three members: your Faculty Advisor is the chair, another faculty member from your program, and any UCB faculty member from outside the department. You may have a fourth member if you would like.

Note to International Students: It is very important that International Students Advance to Candidacy before the start of their 3rd year. Once International Students advance to candidacy, they are exempt from paying tuition for 6 semesters.
Life as a Third Year and Beyond

Annual Committee Meetings
You are required to meet with your committee at least once a year to discuss your progress/problems and then file a form with the Department which summarizes your meeting. The “Report on Progress to Candidacy” can be found here: http://grad.berkeley.edu/policies/pdf/progress_report.pdf. If you are found deficient in having your yearly meetings, you risk losing your status as a student in good standing and jeopardize your funding.

Leaving with a Master's Degree
Students primarily work towards the PhD. The M.S. Plan I or the M.S. Plan II program serves students who enter the PhD degree program but for some reason cannot continue, either because their goals change and/or other extenuating circumstances arise. These plans allow students to show they have successfully completed a course of study and/or research during their time at Berkeley. If considering leaving the PhD program, please discuss this with your Research Advisor and Rocio Sanchez in the Graduate Office.

The M.S Plan I requires a minimum of 20 semester units of upper division and graduate courses, and completion of a thesis. For the 20 unit minimum, 8 units must be from the 200 series.

The M.S Plan II requires a minimum of 24 semester units of upper division and graduate courses, followed by a comprehensive final examination. For the 24 unit minimum, 12 units must be from the 200 series. The comprehensive exam requires a two-hour oral examination conducted by a three-member M.S. committee.

If you decide to leave the program with a M.S. degree after passing your qualifying exam, you may be able to substitute your qualifying exam for the comprehensive exam under the M.S. Plan II. This will require approval from the Graduate Division. Again, please consult with your Research Advisor and Rocio Sanchez in the Graduate Office for support and advice.

Finishing
In order to graduate, you only need to obtain the signatures of your committee members and file the thesis, in the proper format, with the Graduate Division. There is no formal thesis defense in our department, but finishing students traditionally present a departmental seminar (finishing talk) before leaving.

INTERNATIONAL STUDENTS

Berkeley International Office (BIO)
The Berkeley International Office (also called BIO) offers a variety of immigration, financial aid, work permission, and advising services and special programs for Berkeley international students and scholars, and for the Berkeley staff and faculty who work with them.
BIO is a great place to get information on workshops and orientations for international students. It is important to attend these orientations, seminars, and workshops as they offer excellent detailed information regarding the special circumstances and needs pertaining to international students. These events are also a good place to meet friends for support.

Berkeley International Office (BIO)
2299 Piedmont Avenue (at International House)
Berkeley CA 94720-2321
Phone: (510) 642-2818
http://internationaloffice.berkeley.edu/

Glacier Tax Compliance System
Glacier is a secure on-line tax compliance software system that collects tax related information from foreign individuals receiving funds from Berkeley. All foreign individuals receiving funds from the University must have a GLACIER record. GLACIER determines residency status and tax treaty eligibility for the foreign individual.

All international graduate students must have a GLACIER record in order to receive payments from the University. International graduate students are responsible for updating their GLACIER record. Failure to do so can compromise the disbursement of your pay. For more information about GLACIER and for access go to: http://controller.berkeley.edu/payroll/GLACIER/index.htm.

International House at UC Berkeley
The International House, commonly called “I-House” at Berkeley, is a program and residential center dedicated to fostering peaceful interaction, understanding and friendship among people of all races, nations and cultures. About 600 students, half from the US and half from 60-70 nations abroad, live at the International House. During the academic year, residents are registered students or international scholars at UC Berkeley. International House seeks to create an atmosphere where similarities and differences are explored on the basis of mutual respect.

To find out more about programs and services offered at I House, call (510) 642-9490. I House is located at 2299 Piedmont Ave. Berkeley, CA 94720-2320 (cross street is Bancroft Way).

Test of Spoken English (TSE)
The Plant and Microbial Biology Department requires its graduate students to act as teaching assistants for at least two semesters. All students who do not speak English as a native language and who wish to become a Graduate Student Instructor (GSI) must demonstrate oral English proficiency. You may do this by taking the TOEFL iBT or Test of Spoken English (TSE) prior to enrolling at Berkeley or by passing the Speaking Proficiency English Assessment Kit (SPEAK) after you arrive to campus.

For information on SPEAK testing, English language proficiency courses, and testing policies, consult the Graduate Student Instructor Teaching & Resources Center website at http://gsi.berkeley.edu/lpp/teaching.html

THE PLANT GENE EXPRESSION CENTER (PGEC)
What is the PGEC?
The Plant Gene Expression Center located in Albany California is a branch of the USDA, which is primarily involved in basic research issues. Most primary researchers at the PGEC have adjunct faculty positions in the department and, therefore, may serve as academic advisors, instructors, and thesis committee members.

The PGEC Seminar Series
The Thursday Noon seminars feature invited speakers from around the world covering a broad range of topics. Every year graduate students from PGEC are asked to choose at least one speaker and host that speaker during his/her visit.

Rotations, classes and teaching
Students considering doing a rotation at a PGEC lab have several options for transportation between campus and the PGEC. There is plenty of free parking at the PGEC, but parking near campus is often difficult. Parking passes can be obtained for personal vehicles or the two PGEC vans. The #52 and #52L AC Transit bus stops two blocks from the PGEC and goes to and from campus. Another public transportation option is the Recreational Sports Facility (RSF) shuttle, which runs from campus and stops at the PGEC. Often times, one can also coordinate with others who are driving to campus.

Due to the physical distance from campus, it is often most effective for students to try and arrange class and/or teaching schedules in blocks of time. Arranging office hours and class section times around classes, seminars or other activities occurring on campus will save you a lot of time.

TRANSPORTATION

Campus Parking Permits
Parking on or near campus is very limited. It is recommended that you explore all other transportation options before committing to a Student Parking permit. If you are considering purchasing a parking permit to park on campus you must be a registered student who lives outside a 2-mile boundary. Proof of residency is required. Be aware that purchasing a Student Parking Permit does not guarantee you a parking space. Permits cost nearly $100 per month and must be purchased in full for each semester. Rates are pro-rated during the semester. For more information and to purchase permits go to http://pt.berkeley.edu/.

Class Pass
As a registered Cal student, you can ride all semester long on AC Transit and campus shuttle buses for free! You can even ride to San Francisco on AC Transit's Transbay lines. Class pass services are paid via your registration fees and once you are registered you can pick up your class pass at the Cal 1 card office. http://pt.berkeley.edu/pay/transit/classpass

To board either the AC Transit buses or the campus shuttles, just show your Cal Photo ID with the current Class Pass sticker attached, and you’re on your way!
Bear Transit—Campus Shuttles
Campus shuttles can take you from your parking lot to various points on campus. Students now ride campus shuttles free with the Class Pass. For more information and schedules, visit http://pt.berkeley.edu/around/transit/shuttles.

Bay Area Rapid Transit (BART)
BART is the bay area’s electronic rail service. Bart is convenient for commuters traveling farther distances throughout the East Bay and San Francisco. Schedules and fares are available on line at http://www.bart.gov/.

Bicycles
Bicycles are a convenient and inexpensive means of transportation. For those who will commute to school by bike, there are two secure bike rooms in the basement of Koshland Hall.

http://pt.berkeley.edu/around/bike

Licensing your bike can help police retrieve your bike in the event of theft. California State Law also requires that all bicycles be licensed.

Residential Parking
Residential parking in Berkeley often requires a Residential Parking Permit (RPP). Most residential areas are limited to 2-hour parking unless a residential parking permit is displayed. Permits can be obtained by showing current vehicle registration at your Berkeley address and picture identification. The cost of an annual permit is $34.50 per vehicle and permits purchased after December 1st are pro-rated. http://www.ci.berkeley.ca.us/contentdisplay.aspx?id=6272

UNIVERSITY SERVICES

Medical Care
University Health Services (UHS) provides a comprehensive, state-of-the-art outpatient clinic, complete with medical, mental health and wellness units. All registered students have access to medical care, counseling, and health promotion programs offered by UHS. Registration fees support these services, and many are provided without additional charge.

Students can use the medical services just as they would their regular doctor's office and urgent care center. The facility is fully accredited, staffed by board-certified physicians, nurse practitioner, physician assistants, a nutritionist, and nurses. A comprehensive counseling center, staffed by psychiatrists, psychologists and licensed therapists, offers individual and group counseling, and includes a complete career-counseling center. The health promotion unit offers programs and services for keeping students healthy and safe, including many opportunities for students to get involved in shaping the public health of the campus.

For health services visit the Tang Center located at 2222 Bancroft Way (between Ellsworth and Fulton/Oxford Street); Call 642-2000 UHS Main Phone Number; Semester Hours: 8AM - 5PM (http://www.uhs.berkeley.edu/).
Holiday and summer hours vary. The UHS has a reduced schedule during breaks, holidays, and summer. Check the "Update" section on the UHS web-site home page during these times for up-to-date information.

**Urgent Care Hours** during the academic year: 8AM - 5PM Monday – Friday. Urgent Care parking and entrance is located on Durant Avenue between Fulton and Ellsworth Streets. When Urgent Care is not open, call the 24-hour advice line for direction (510) 643-7197. The advice nurse will help you decide if you need immediate attention and, if necessary, direct you to the nearest hospital emergency department or other local urgent care facility.

**Health Insurance**
It is an enrollment requirement that all UCB students be covered by major medical health insurance while attending UC Berkeley. UC Berkeley provides the Student Health Insurance Plan (SHIP) in which all registered students are automatically enrolled. While UHS provides primary care to students, SHIP covers hospitalization, off-campus care and some specialty services not provided within UHS. Together, UHS and SHIP provide a complete health care package for students. The fee for SHIP is billed as part of student registration fees and is paid by the department. Information on the plan can be found here: [http://www.uhs.berkeley.edu/students/insurance/index.shtml](http://www.uhs.berkeley.edu/students/insurance/index.shtml).

**Dental Insurance**
Dental coverage is included as part of SHIP. All UCB students enrolled in SHIP will automatically receive benefits covering preventive and general restorative dental care. See the website for more info: [http://www.uhs.berkeley.edu/students/insurance/dentalannouncement.shtml](http://www.uhs.berkeley.edu/students/insurance/dentalannouncement.shtml).

**Child Care**
Early Childhood Education Program, under University management, subsidizes child care services for student families at facilities located on or near campus for children aged 3 months to 7 years. Admission is competitive so be advised to obtain an application form and fill it out ASAP. Deadline for submitting applications is May 31 for Fall program and November 15 for Spring program. Applications received after those dates will be added to the eligibility list.

Lowest income families are given highest priority, as are single parent families or families in which both parents are UCB students. At least one parent must be a registered University of California Berkeley student. Families will continue to remain enrolled in the program as long as at least one parent maintains full time UC Berkeley registered student status. Fees are sliding scale, based on your income. Parents are asked to work in the centers two hours each week in a variety of roles. They assist in classroom activities / field trips, participate in the operation of the food program, and serve on the Parent Advisory Committee. This participation time will be scheduled on one of the days your child is enrolled. Each family is offered 5 full days of care.

**Office for Student Families:** 2610 Channing Way; Phone: (510) 642-1827 / e-mail jcayot@uclink4.berkeley.edu; Office hours: Monday - Friday 8:00 am - 5:00 pm.
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<td>Admissions</td>
<td>642-7405</td>
<td><a href="http://grad.berkeley.edu/">http://grad.berkeley.edu/</a></td>
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<td>Billing &amp; Payment Services</td>
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<td>Cal Parents Helpline</td>
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<td>Cal Performances Box Office</td>
<td>642-9988</td>
<td><a href="http://www.calperfs.berkeley.edu/">http://www.calperfs.berkeley.edu/</a></td>
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<td><a href="http://career.berkeley.edu/">http://career.berkeley.edu/</a></td>
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<td>Graduate Financial Aid</td>
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<td>Graduate Fellowships Office</td>
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<td>Plant and Microbial Biology</td>
<td>642-9999</td>
<td><a href="http://pmb.berkeley.edu/">http://pmb.berkeley.edu/</a></td>
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<td>Police (non-emergency)</td>
<td>642-6760</td>
<td><a href="http://police.berkeley.edu/">http://police.berkeley.edu/</a></td>
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<td>Registrar &amp; Transcripts</td>
<td>642-5990</td>
<td><a href="http://registrar.berkeley.edu/">http://registrar.berkeley.edu/</a></td>
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<td>Student Learning Center</td>
<td>642-7332</td>
<td><a href="http://sle.berkeley.edu/">http://sle.berkeley.edu/</a></td>
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<td>Student Life, Office of</td>
<td>642-7224</td>
<td><a href="http://slas.berkeley.edu/">http://slas.berkeley.edu/</a></td>
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<td>University Health Services</td>
<td>642-2000</td>
<td><a href="http://www.uhs.berkeley.edu/">http://www.uhs.berkeley.edu/</a></td>
</tr>
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<td>Visitors Services</td>
<td>642-5215</td>
<td><a href="http://www.berkeley.edu/visitors/">http://www.berkeley.edu/visitors/</a></td>
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*Note: If dialing from a campus phone, you only need to dial the last five digits of the phone number.*
RESOURCES FOR GRADUATE STUDENTS

Bear Facts (http://bearfacts.berkeley.edu/) - online student portal for e-bill, unofficial transcripts, and student information.

Billing & Payment Services (http://billing.berkeley.edu/) – information about University loans and Campus Accounts Receivable System (CARS) accounts.

Berkeley Art Museum and Pacific Film Archive (http://www.bampfa.berkeley.edu/) – information on art exhibits, film screenings, and museum collections.

Berkeley International Office (http://internationaloffice.berkeley.edu/) – resources and advice on immigration, financial, and personal matters.

Calbears (http://calbears.cstv.com/) – official site of the California Golden Bears; includes team schedules and ticket information.

Campus Life and Leadership (http://students.berkeley.edu/osl/osl.asp.) – expert and hub for transformational student leadership. CLL is a source for student organizations and leadership programs. It is home to the Cal Corps Public Service Center, the Gender Equity Resource Center, and the Center for Student Conduct and Community Standards.

Career Center (http://career.berkeley.edu/) – sponsors workshops specifically for graduate students and offers Ph.D. career counseling services by appointment.

Child Care (Early Childhood Education Programs) (http://www.housing.berkeley.edu/child/) – information about campus child care programs.

Computing (http://technology.berkeley.edu/student/) – general information on computing services for students.

Counseling Services - University Health Services (http://www.uhs.berkeley.edu/students/counseling/) – provides group and individual counseling for students on a variety of personal, academic, and career-related issues.

Disabled Students’ Program (DSP) (http://dsp.berkeley.edu/) – offers services and resources for students with disabilities.

East Bay Regional Parks (http://www.ebparks.org/) – information about the many parks and outdoor activities right in our own backyard.

Electronic Funds Transfer (EFT) (http://eftstudent.berkeley.edu)

Financial Aid Office (FAO) (http://students.berkeley.edu/finaid/) – important information for graduate students about student loans and federal student aid.

1 Some resource links and text are taken from the Guide to Graduate Policy document produced by the Graduate Division.
Graduate Assembly (GA) (http://ga.berkeley.edu/) – graduate student arm of the student government on campus.

Graduate Social Club (http://gsc.berkeley.edu/) – events for grad students to meet and mingle.

Graduate Student Instructor (GSI) Teaching & Resource Center (http://gsi.berkeley.edu) - information on requirements for first time GSIs, schedules for workshops on various topics, portal for online ethics course.

Housing (Cal Rentals) (https://calrentals.housing.berkeley.edu/index.htm) – Berkeley’s own rental listings unit and resource for finding local housing.

Libraries (http://www.lib.berkeley.edu/) – home page for the University Library system.

Library Research Services for Graduate Students (http://www.lib.berkeley.edu/services/for_users/grad_students.html) – UC Berkeley Library resources for graduate students.

Office of the Registrar (OAR) (http://registrar.berkeley.edu/) – up-to-date information on registration fees, adding/dropping a class, Tele-BEARS, Bear Facts, residency, grades, and more.

Ombudsperson (642-5754) – neutral, confidential assistance in situations where you feel you have been treated unfairly or need help with a procedural or academic problem.

Parking & Transportation (http://pt.berkeley.edu/) – information about parking permits, campus shuttles, and alternative transportation.

Police (http://police.berkeley.edu/) – information about campus safety programs, night escort service, and emergency preparedness.

Recreational Sports Facility (RSF) (http://calbears.berkeley.edu/) – information on membership, fitness classes, sports facilities, personal training, and more.

Residency (http://registrar.berkeley.edu/Residency/legalinfo.html) – information on CA residency and how to petition to be a CA resident.

Resource (http://resource.berkeley.edu/) – online guide for new Berkeley students with lots of information about shopping, dining, recreation, nightlife, campus organizations, and more.

Student Calendar (http://registrar.berkeley.edu/GeneralInfo/stucal.html) – important dates for filing and registration.

The Parents Network (http://parents.berkeley.edu/) – newsletters, recommendations, and advice for student parents.

University Health Services (UHS) (http://www.uhs.berkeley.edu/) – information about student medical care, counseling, psychological services, insurance, workshops, and more.
**511 Transit** (http://www.511.org/) – provides schedules for, and information about, major Bay Area public transportation systems, including BART, San Francisco MUNI, Caltrain, and AC Transit.