

**STUDENT ORIENTATION GUIDE**  
*Marine Environmental Biology Section*  
**University of Southern California**



**Fall 2003**

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## *Welcome*

Welcome to graduate study in Marine Environmental Biology at USC! You are officially embarking upon your professional career in academics, and we hope your years here are exciting, challenging, and fruitful. The purpose of this brochure is to try and help smooth the way during your first few weeks, as well as to provide some basic information with regard to our program, being a graduate student at USC, and life in L.A. in general. In addition to this guide, a good source of information is provided by a free booklet entitled *SCampus*, which you can obtain at Topping Student Center. Of course, it is always a good idea to solicit information and advice from more senior graduate students and from faculty. Senior graduate students can be very helpful for adjusting to the “personal” side of life at USC, while Faculty and the Graduate Student Coordinator should be your source of information for “official” aspects of the program and academic life.

Our support staff is also available to help out with procedures for registration and other logistical details. Bill Trusten is the Graduate Student Coordinator for Biological Sciences; he is located in SHS 172, mc 1340, x07766. Bill is highly knowledgeable concerning all aspects of the graduate program.

Once again, welcome to the program!

Douglas Capone  
Director, Marine Environmental Biology

## *Registration Process*

ACTION	SEE
1) First year students: Set up advisement appointment with your advisor	Bill Trusten, SHS 172, x07766
Continuing students:	Check your mailbox for registration
2) Obtain the signed approval form from your advisor and return it to Bill Trusten for "D" clearance.	
3) Register via TouchTone Registration (follow directions in the <i>Schedule of Classes</i> ).	
4) Get your fee bill and pay all necessary fees by deadline.	
5) Pick up your ID card from USCard services (Commons Lobby).	
6) Get validation sticker from your section Administrative Assistant.	

If you have any problems with your fee bill, please see Bill Trusten.

### Registration Directory

Registration Packets Enrollment & Drop/Add	Registration Building (REG) 1st Floor
American Language Institute	Jefferson Building (JEF), Room 150
Office of International Students	STU 300
USCard	Commons Lobby
Health Insurance	Student Health Center (SHC)
Housing/Dining Services	Parking Structure C
Financial Aid	Hazel and Stanley Hall (HSH)
Parking Permits/Ridesharing	Childs Way Building I
Payment of Fees/Cashier's Office	King Hall, 2nd Floor

## *Student Health and Insurance*

All Teaching Assistants and Research Assistants will have the student health center fee and student health insurance fee paid by the University. You should enroll in the USC health plan for coverage. **Enrollment deadline for health insurance is September 15.** Go to the Student Health Center for information and enrollment forms.

### Student Health Center

The Student Health Center provides the following services: primary care, basic emergency care, an urgent care clinic, Saturday clinics, specialist clinics, and a pharmacy. You are eligible to use the Health Center if you are enrolled in classes and a Health Center fee is listed on your fee bill. If you are not taking classes (as in summer) you must pay the appropriate fee for use of the Health Center.

If you are eligible, most care is free. There are nominal charges for some lab tests, prescriptions, orthopedic appliances, and copies of medical records. Hospitalization is NOT covered but must be purchased separately (see above). Should you have questions, call 740-5344.

### Dental Care

Dental care is not covered by your Health Center fee or by health insurance. You should see a private dentist or consider the USC Dental School for inexpensive dental care. Call the Dental School at 740-2800 for details.

## *Program Life*

### Sectional Seminars

An important part of your training is the opportunity to attend and participate in research seminars. Seminars are given on most Tuesdays at 12:00 Noon in the Torrey Webb Room of AHF. A complete list of invited speakers will be given to you near the beginning of each semester. Speakers are selected by faculty and students. Seminars last for one hour and there is always time for questions and answers immediately following. You are expected to attend all marine biology seminars. Notices will be posted prominently in Allan Hancock as well as updated weekly on the Biological Sciences Homepage:  
<http://www.usc.edu/dept/LAS/biosci/seminars/index.html>.

Additionally, other groups and departments offer their own seminar series such as Neurobiology, Molecular Biology, Gerontology, Medical Sciences (Biochemistry, Microbiology, Pathology, Cell and Anatomy, Molecular Pharmacology and Toxicology), to name a few. Finally, schedules of seminars offered at other universities (CalTech, UCLA) will be posted as they are received on the seminar board located just outside of AHF 107. Be sure to check the bulletin boards weekly for announcements.

There are many benefits to attending seminars. You will learn a great deal, especially in areas outside your expertise. You will have the chance to meet many distinguished scientists. These contacts will help you in your research and could lead to future letters of reference or postdoctoral opportunities.

### The Marine Environmental Biology Office

There are at least two offices from which you can obtain administrative support. For matters relating to your research or the graduate program, see Don Bingham, the Administrative Assistant for the Marine Environmental Biology Program (AHF 107E, x05779, [Bingham@usc.edu](mailto:Bingham@usc.edu)). See Bill Trusten if you any questions about registration, grades, Graduate School requirements, etc. For academic matters, see your faculty advisor. We cannot provide you with secretarial services per se, so you will have to do your own word processing, copying, library work. We do have a typewriter, computer, fax machine (740-8123 located in AHF 107), copying machines, and other equipment available for research-related purposes.

### Offices, Mail, Keys

All students receive incoming mail in the mailroom in AHF 107. Mail should be addressed as follows: Marine Environmental Biology, Department of Biological Sciences, University of Southern California, AHF 107, Los Angeles, CA 90089-0371. **This 9-digit Zip Code is extremely important.** The digits 0371 identify Allen Hancock Foundation. These digits are all that is necessary for intercampus mail. Outgoing mail and stamped mail can be left in the mailroom for pickup by Mailing Services.

Keys can be obtained from the Administrative Assistant in the Marine Environmental Biology office. There is a charge for each key you need (\$10 for AHF keys). Never leave your keys unattended. We take the matter of security very seriously. You must do your part to maintain the safety of the people and property that we depend on. Never prop open a locked door, especially after hours. Do not give your keys to others. If you see someone around the labs or halls that you do not recognize, call security (x06000 or x04321—emergency).

## Libraries

The Seaver Science Library (SSL), located in the Seaver Science Center, is the principal science library on the main campus at USC. A good collection of current journals, arranged in alphabetical order, will be found on open shelves on the first floor. Older journals are bound and shelved together with books on the upper floors. Periodicals cannot be checked out, but photocopiers are available in the library. See the reference desk on the first floor for additional information and help (i.e., database searches, computer networks, etc.)

Other main campus libraries that might be of use are the Hancock Library, located on the second floor of AHF, Leavey Library (LVL), and the Doheny Memorial Library (DML). The Hancock Library is especially strong in the marine sciences and systematics, and the Doheny Library is the main undergraduate library with many general interest books, periodicals, and reference materials.

A USC library card must be obtained for library privileges. See the person at the main circulation desk in DML or SSC. You must have your I.D. card with a current registration sticker. Stickers are available from the section administrative assistants at the beginning of each semester. The card is valid for one semester only. You must renew at the beginning of each semester.

There are several excellent libraries off campus. Within the USC system, there is the Norris Medical Library on the Health Sciences Campus. Journal articles can be copied for you and sent via campus mail, but this takes two weeks or so. Inquire at the reference desk in SSL if you're interested in this service. By far the best library in the area is UCLA's Biomedical Library. Just about any journal, no matter how obscure or old, can be found there. There are numerous copying machines available that use debit cards that can be purchased from vending machines. USC students with valid identification can obtain a UCLA library card. Inquire at the circulation desk in the Biomed Library.

## Information on Computing

USC maintains an extensive computer network that can be accessed from several public user rooms around campus, by modem from a home computer, and, most importantly, from any computer connected to local networks such as the Ethernet in the molecular biology laboratories. An extensive array of software is available on the campus network, and services such as electronic mail, database searching, and bulletin board access is provided free of charge to graduate students. The Computing Center offers advice and training sessions on using the system and its software. The key to this world of information is a computing account.

To encourage greater student use of university computing services and to ease the process of getting online, UCS has instituted a new procedure for issuing computer accounts to students.

Computer accounts will be created automatically for all students enrolled in degree programs. To activate your computer account, students will need to complete a simple Web based form and choose a password. To access this form, students can visit one of five public computing areas (Leavey Information Commons, KOH 200, SAL 125, or WPH B34 on the University Park campus, or Norris Medical Library on the Health Sciences Campus). In these facilities, students will find step-by-step instructions on how to activate new accounts.

Students who wish to connect to the university network by modem will need to install and configure PPP software on their personal computers. Free PPP software can be downloaded from public machines in UCS user rooms.

Automatic accounts will be available to enrolled students two weeks before classes begin. For more information on automatic accounts, please feel free to contact either UCS's Customer Support Center or Computer Accounts Administration office at x05555, or send email to ([consult@usc.edu](mailto:consult@usc.edu)).

## *Personal Life*

### Housing

On-Campus: The USC Student Housing Office (x02546) is in Parking Structure C.

#### Off-Campus:

Most graduate students choose to live off-campus. The major Los Angeles newspaper (*The LA Times*) as well as smaller community newspapers (*Hollywood Press*, *Santa Monica Evening Outlook*, *The Daily Breeze* - Redondo-Hermosa-Manhattan Beach areas, *Star News* - Pasadena area), *Northeast Newspaper* - Eagle Rock, El Sereno, East Los Angeles areas, have listings for apartments and houses for rent. You can also check listings in the student newspaper (*The Daily Trojan*). There is a classified advertising paper (*The Recycler*) which has many listings. Finally, just walk around a neighborhood you like and look for vacancy signs.

Before you start your off-campus housing search, there is one very important purchase you should consider: a *Thomas Brothers Street Atlas of Los Angeles and Orange Counties*. These are available at the USC Bookstore (next to the Commons) or at just about any bookstore in the LA area. With the "Thomas Guide" you can locate any street address in LA and Orange counties quickly and easily. Even long-time Los Angeles residents find a "Thomas Guide" to be extremely valuable.

Non-University housing near the USC campus is limited and therefore fills up early. In addition, some areas close to campus are pretty rough; you should definitely stay away from the south side of campus (near the stadium, Sports Arena, etc.). The area north of campus, known as "North University Park", is generally considered to be a safe area. Because the area is small, availability is limited and landlords are able to charge more, making it difficult to find a bargain. Nevertheless, there are a number of older places with "character" that are not too expensive and entirely livable. These must be sought out early, but try anyway - you might be lucky. One advantage of living in this area is that you can easily walk or bike to campus.

A word to the wise regarding safety: you should never walk around campus late at night alone. If you are working in the lab late at night, call the Escort Service (see below) for a pick-up at the building entrance.

### Transportation and Parking

The Los Angeles transportation system is the Metropolitan Transit Authority (*MTA*). The MTA information number is 213/626-4455. There is excellent express bus service from several cities into the downtown area. Some routes include stops at or near USC. You can usually get between any two places in the L.A. area by bus, but one or two transfers may be required. The fare is \$1.35, plus 25 cents for a transfer.

Los Angeles is installing a new subway and rail transit system. Currently, the "Blue Line" runs between Long Beach and L.A., and the "Red Line" runs from the Civic Center in downtown L.A. to what is known as the "Wilshire Corridor". Also, [the new "Gold Line" runs from downtown through Pasadena to Sierra Madre.](#) [Purchase](#) discount MTA bus passes from USC Transportation Services.

USC operates a Tram Service and an Escort Service. The tram provides transportation to the housing areas off campus, to the Health Sciences Campus, and to campus parking lots Monday through Friday. You can also call the Escort Service to transport you to locations within approximately one mile from the center of campus (including off campus housing area). If you work in the lab late at night, call the Escort Service (x04911) rather than walk to the parking structure alone. See *SCampus* for information and schedules.

If you live close to campus you may want to commute by bicycle. Keep in mind, however, that the traffic in

stolen bikes near USC is very high, so take precautions. Don't park your bike outside unlocked; keep it in your apartment and, while you are at school, keep it in your office/lab. Bicycles must be licensed - see procedures in *SCampus*.

If you commute by car you would be wise to invest in a USC Parking Permit, which will entitle you to park in certain designated areas on campus. See the "Schedule of Classes" for details. You obtain a parking permit from the Transportation Office, located in Parking Structure A. There is some off-campus street parking but it is scarce and not very safe. There are also time restrictions for street parking - be sure to read the posted signs before you leave your car. Regardless of where you park, you should always lock your car and make certain that you leave nothing of value (tape deck, books, clothes, tennis rackets, etc.) in a place where it can be seen from the outside of the car.

Los Angeles County sponsors a service called "Commuter Computer", which is designed to help commuters form car pools. If you would like to car pool, but have trouble finding partners, you can submit your name and commuting schedule to the "Commuter Computer", 213/380-RIDE. It will attempt to match you up with other people with similar commuting needs. USC also has an office on campus to help with car pooling needs called "Commuter Connections" (x07433), which is located on the first floor of Childs Way Building I.

### Culture and Recreation

Los Angeles has no shortage of cultural and recreational activities. There is something for everyone, from amusement parks (Disneyland, Magic Mountain, Knott's Berry Farm) to art museums (LA County, J. Paul Getty, Norton Simon, MOCA - Museum of Contemporary Art, Huntington Library and Art Gallery); from classical music (LA Philharmonic at both the Music Center and Hollywood Bowl) to contemporary (Greek Theater, Universal Amphitheater); from classic theater and musicals (Shubert, Ahmanson, Pantages) to first-run contemporary works (Mark Taper Forum, any of the many local smaller theaters); from zoos (LA, San Diego) to aquariums (Sea World); and horse racing (Hollywood Park, Santa Anita Park) to all pro sports (LA Dodgers, Kings, Lakers, Angels) and so on. The LA County Museum of Natural History, the LA County Museum of Science and Industry, and the California Afro-American Museum are just south of campus in Exposition Park.

For a unique experience, visit the Page Museum and La Brea Tar Pits next to the LA County Museum of Art on Wilshire (part of the Wilshire Corridor). Students are often entitled to discounts, and student rush tickets at concerts, etc. can be a really great deal. You must have a student ID with a current registration sticker. Here are a few ways to learn about what's going on: the *New Times* and the *LA Weekly* are free and usually available each Thursday afternoon outside the Topping Student Center; also check the "Calendar" section of the Sunday *Los Angeles Times* and *Los Angeles Magazine*.

Recreational facilities in the Los Angeles area are superior. There are beaches, parks, golf courses and tennis courts. The mountains are an hour away where hiking is excellent and skiing sometimes good.

There's also plenty going on at USC, including plays, musicals, concerts, first-run movies, film retrospectives, and art shows. Most popular, however are the athletic events, especially football games. It may seem intellectually inappropriate to go nuts over football, but USC football games (particularly the UCLA game) are exciting spectacles that you really should experience at least once. If you enjoy watching college athletics you ought to invest in a "Student Activity Card." These are available during registration week. The Student Activity Card is essentially a season ticket to all home USC athletic events (including all sports). It also guarantees you the opportunity to purchase a Rose Bowl Ticket if USC is selected to play.

Excellent athletic facilities available to students can be found at the Lyon Center (next to the McDonald's Olympic Swim Stadium). Entrance and basic facilities are free to students with current ID. There are several tennis courts, handball and racquetball courts, a weight room, and a track generally available for students use. Two new swimming pools, adjacent to the Lyon Center were built for diving and swimming events in the 1984 Olympic Games. Biology students can form teams to enter University intramural leagues in a number of sports (e.g., basketball, softball, coed water polo, coed volleyball). If you're interest in participating, watch for notices throughout the section.

Finally, USC maintains a research lab on Santa Catalina Island in Big Fisherman Cove at Two Harbors. You can get there for free on the USC boat, which travels between Catalina and the USC Marine Support Facility in LA Harbor. Call 743-6792 for details.

### Banking and Shopping

At the University Village, there is one bank, Bank of America, which offers bank cards as well as checking and savings accounts. Automatic teller machines are available there and on campus (near the University Bookstore). NEVER GO ALONE TO AN AUTOMATIC TELLER MACHINE AFTER DARK. If you open a savings account with them, they will cash your personal checks. A particularly good way to meet your banking needs is the USC Federal Credit Union (KOH 200), which is on campus and offers good deals on checking and savings accounts. The Credit Union currently has three automatic tellers on campus (near the University Bookstore, the Commons Lobby, and Kings Hall).

### Books

The University has an excellent bookstore and graduate students with TAs or RAs are entitled to a 10% discount with their ID card. Another good store for books and supplies is "The Paper Clip", next to campus in University Village. The also give a 10% discount.

### Supermarkets

The 32nd Street Market, located in University Village, is the only supermarket near USC. The food, meat, and produce are usually acceptable. The market will cash personal checks if you have a California Driver's License. You can also send telegrams and mail packages as well as purchase money orders.

A Ralph's Supermarket has opened on Vermont Avenue, at the corner of Adams Boulevard. A Smart and Final store has opened on Vermont Avenue directly across from campus--janitorial supplies, food in large quantities at discount rates can be found here.

### Other Important Locations

A United States Post Office is at 3585 S. Vermont Avenue (directly West of the University). There is also a mail stop in the Commons Lobby that provides a limited number of postal services (at an additional charge).

The California Department of Motor Vehicles (DMV) is at 3615 S. Hope Street, 2 blocks East of campus.

## *General Information about Financial Aid*

It is the intention of the Marine Environmental Biology Section to provide or arrange for the provision of financial support (stipend + tuition) for all of our Ph.D. students. Students should feel assured that the faculty will do everything possible to meet this goal. Please note that Graduate School rules prohibit full time student from accepting any employment above and beyond their graduate assistantships (see Graduate Assistantship Handbook). There are 4 main sources of support for graduate students: Teaching Assistantships, Research Assistantships, Training Grants, and Individual Fellowships and Grants.

### 1) Teaching Assistantships

We are fortunate to be part of a large undergraduate department, because this gives us access to many TAs. The exact number varies with enrollments, but is divided equally between the 3 research sections. TAs, which are generally awarded for an academic year, carry a stipend and full tuition remission. You must maintain at least a 3.0 GPA to receive the tuition remission. Nine monthly payments are made beginning September 26 and ending May 26. It is possible to arrange for payments to begin August 26 (for a total of ten payments). See Bill Trusten for more information. The authority to offer TAs rests exclusively with the Biological Sciences Department Chair, Dr. Sarah Bottjer. She consults extensively with the Graduate Admissions Committees of each of the sections, and with faculty instructors.

The workload associated with TAs is quite variable, depending on the course in question and the familiarity of the TA with the subject matter. Consult a few of the more advanced graduate students for tips on course selection. Keep in mind that the best way to learn a subject in detail is to attempt to teach it to someone else. Whatever course you are assigned, please take your responsibilities very seriously. You are under a moral and legal obligation to do your best for your students. Undergraduates pay a hefty tuition bill, so they are entitled to your best efforts. Learn the subject matter diligently and find creative ways to explain it. Practice your verbal communication skills. Make yourself available and approachable. Conform to high ethical standards and respect confidentiality of your position. All of these skills will be directly useful to you in your future careers as researchers and educators. We faculty view the TAs as an important part of your training. Please be aware that as with any other job, your TA position can be terminated for poor performance.

### 2) Research Assistantships

Research Assistants are paid on the same scale and receive identical benefits as TAs. Whereas TAs are funded by the department, RAs are funded by the research grants of individual faculty. As the name implies, RAs do research, usually directed the Specific Aims of the grant that funds the position. The time required is often more than that for a TA, but this is usually not considered a burden because the work should be directly relevant to your research training. At a minimum, an RA should be considered a 15-20 hour per week job. Students might opt to put in more time, however, depending on the relationship between RA duties and the dissertation project, or the likelihood of co-authoring resulting publications. The relation between the RA project and the dissertation project varies depending on the faculty member involved and other circumstances. In some cases, the two projects are the same and you will in effect be paid for doing your dissertation research. In others, efforts are made to keep the projects distinctly different. Good arguments can be made for either approach.

Research assistantships need to be cultivated. Try to identify your research interests as early as possible, certainly by the end of your second semester. Determine which professor best matches those interests. If necessary, do some reading to educate yourself about that professor's work and the field in general. Tell the professor you would like to work with him or her and inquire about the availability of RAs. Before you start an RA, be sure you understand what is expected of you, what you can expect from the professor, and what relations might exist between your work and dissertation research.

TAships vs. RAships: Your teaching assistant experience can be very rewarding. You will learn a great deal and have the satisfaction of seeing that knowledge take root in others. You may establish lasting friendships or mentor relationships with some of your students. On the other hand, you are here primarily to do research, not teach. If you are not very efficient in organizing your time, progress on your dissertation research may be slowed by extended service as a TA. Most agree that RAships are preferable. Try to be flexible, though. As grant budgets wax and wane, it may be necessary to RAs to take TAships to cover lean periods.

### 3) Individual Fellowships and Grants

There are an enormous number of grants and financial aid available to students. Detailed information can be obtained from two sources. First, the Graduate School (UGR 105, x35179) has a partial listing of available grants. Second, there is a computerized database in Doheny Library (DHL reference section). This database contains literally hundreds of grants to choose from.

### 4) Summer Support

Your decision to be a Ph.D. student is a year-round commitment. You should view the summer as an opportunity to engage intensively in research, free from the distractions of coursework, TA assignments, and the like. We expect you to be in the laboratories, engaged in full time research, every summer. We will do everything we can to provide the financial support to make this possible. Please be aware, however, that it is your responsibility to take the initiative in securing summer positions. Early in the spring semester, if not earlier, every new student should make at least a tentative decision about which laboratory to work in. Talk to that professor and see if support is available. The best plan would be to secure a RAship, although there are a small number of summer TAships available. These provide only partial support and you must put your bid in early to Carolyn Facer. If these possibilities don't work out, see one of the Graduate Advisors or the Section Director. They may be aware of other possibilities for summer funding.

**DEPARTMENT OF BIOLOGICAL SCIENCES**  
**GRADUATE PROGRAM IN MARINE ENVIRONMENTAL BIOLOGY**  
**REQUIREMENTS AND POLICIES**

Revised August, 2003

## **REQUIREMENTS AND POLICIES GOVERNING THE GRADUATE PROGRAM IN MARINE ENVIRONMENTAL BIOLOGY**

### **The Graduate Program in Marine Environmental Biology & its Administration**

#### **Introduction**

Graduate students in the Graduate Program in Marine Environmental (referred to subsequently as "GPMEB" or the "Program") may pursue a Ph.D. degree.

At the University of Southern California, graduate education is the responsibility of the Department, but the University's Graduate School establishes minimum requirements concerning grade point average, number and distribution of units, residency, time limits, etc. that are common to all advanced degrees offered within the College of Letters, Arts and Sciences at the University. Specific courses, examinations, skills, and research requirements are established by the student's program of study, in this case the Graduate Program in Marine Environmental Biology. Collectively, both sets of regulations constitute the student's "degree requirements," all of which must be met by the student.

Graduate School regulations are listed in the current *University of Southern California Catalogue* somewhat confusingly, one part of these are scattered in the section on "Academic Policies and Information" near the beginning of the *USC Catalogue* and the rest are found near the middle of the *USC Catalogue* under "The Graduate School." Those regulations, which most commonly affect GPMEB students, are included in this document, but this listing should not be considered definitive.

GPMEB regulations are listed in this document; the major requirements of degrees in the GPMEB are also listed in the *USC Catalogue* under "Department of Biological Sciences."

#### **Program Administration--The Graduate School**

The Graduate School maintains the University's official Permanent Graduate Student File and is ultimately responsible for admission of our graduate students and the awarding of their degrees. As noted above the Graduate School establishes requirements concerning grade point average, number and distribution of units, residency, and time limits that are common to advanced degree programs in all units under their jurisdiction, including the Department of Biological Sciences.

Official forms are used to track a student's progress by The Graduate School and completion and submittal of these usually is to be at a specified point in the student's tenure. Timetables for the completion of degree requirements are available at The Graduate School. The schedule for the Ph.D. student's final and penultimate semesters are especially detailed and need to be adhered to closely.

All Graduate School forms prepared by or on behalf of the student must be approved by the Director of the Program and by the Chair of the Department before their submittal to the Graduate School. All Graduate School forms are available from the Graduate Student Coordinator, Bill Trusten.

#### **Graduate Student Representatives**

In late spring, GPMEB students select two graduate students to serve as Graduate Student Representative and Alternate Graduate Student Representative for the coming academic year. Both students must have passed their Qualifying Examination in order to be eligible for the post. The Alternate will represent the graduate students in the Graduate Student Representative's absence or by the latter's appointment. The Graduate Student Representative has one vote in meetings of the GPMEB Faculty representing the opinions of the graduate students.

The Graduate Student Representative has no voting power either in the matter of continuation of fellow graduate students or in matters concerning the Qualifying Examination. At the option of the student examined, the Graduate Student Representative may also be present during the oral part of the Qualifying Examination.

## **Graduate Student Coordinator of GPMEB**

The Graduate Student Coordinator of GPMEB is the staff member responsible for processing and maintaining graduate student files; serving as liaison between the students, GPMEB Faculty, and the Graduate School; and making available application materials, Graduate School Forms, and other relevant documents. A permanent Department file on each student is maintained in the Marine Environmental Biology Program Office.

## **Student Advisement and Guidance**

### **The First Year Advisor; Initial Advisement and Evaluation by Student's Advisor**

Most students have a first-year advisor who is identified in the acceptance letter. This initial advisor may be replaced by another faculty member with whom the student has closer research affiliations at the request of the student and with the approval of the new advisor. If an incoming student has not chosen an advisor, this should be a priority during the first semester.

The Program provides an initial orientation for all incoming students. During registration week of a graduate student's first semester at USC, the student's initial advisor meets with the student to review his/her previous course work and experiences and to discuss career objectives. A primary purpose of this initial interview is to identify any major deficiencies in a student's preparation and to suggest means of remedying such deficiencies should they exist.

### **Screening Committee**

A Screening Committee is created each year and consists of the members of the admissions committee plus the student's advisor. This committee will meet with incoming students as soon as possible to evaluate the student's background and make recommendations for developing a solid base in marine biology. They will administer the Screening Examination, which is given near the end of the student's second semester of graduate work at USC. The Screening Committee will also be responsible for the student's advisement and guidance from the time of its appointment until the five-member Ph.D. Guidance Committee is established. Each student's performance will be reported in writing on the GPMEB's *Report of the Screening Committee*.

## **Requirements for the Ph.D. Degree**

### **Time Schedule**

All course requirements for the Ph.D. Degree are normally completed within three calendar years from the date on which the student took his/her first course at USC and must be completed within eight calendar years from that time.

### **General Requirements**

A total of 60 units must be completed for the Ph.D. Degree.

### **Course Requirements--Core courses**

Two core courses are currently required: BISC 582 and a new, 2-unit course (a Faculty Lecture Seminar) currently in development. These courses should be taken during the student's first year at USC. Additionally, students will be required to take 4 units of BISC 529 (Marine Environmental Biology Seminar).

Students must receive a grade of B or better in each core class and maintain a cumulative 3.0 Grade Point Average in all coursework.

### **Official Guidance Committees**

A five-person Ph.D. Guidance Committee should be established soon after the screening exam but no later than the fourth semester of enrollment for a student seeking a Ph.D. degree. After the student has passed the Qualifying Examination, the Ph.D. Guidance Committee is known as the Dissertation Committee.

### **The Student and His/Her Responsibilities**

The student is ultimately responsible for his/her graduate career and must be familiar with Graduate School and GPMEB requirements and responsible for their timely completion.

If a student's needs are not being met, he/she should seek redress, using the following chain of command: advisor, advisory committee (screening, guidance, dissertation), Director of the Program, Department Chair, and Graduate School.

In addition to all other rules, the University has established codes of conduct to which all students must adhere. One aspect of graduate training -- service as a teaching assistant -- places them in a position of power over undergraduate students. That position implies added responsibilities and liabilities, especially in respect to such matters as fairness, equal treatment, sexual harassment, etc. Information on University policies concerning conduct is available in *SCampus*. Further information or sources of information may be obtained from the Department office.

### **Formal Graduate Seminars**

Students must complete a minimum of three (4) 2-unit graduate seminars. Because a critical feature of such seminars is exposure to current literature, all four required seminars must be completed during the student's tenure at USC. With the written permission of the student's committee, a formal course completed at another institution may be counted as one of the three required seminars (the course must have been completed during the student's tenure here, however).

### **Research Tool Requirement**

Proficiency in statistics is a necessary skill for all scientists. Satisfactory skill level may be demonstrated by one of the following:

- a) completion (grade of B or better) of a course approved by majority vote of the Marine Environmental Biology Program faculty.
- b) acceptance of course work previously completed either at USC or elsewhere. The acceptability of a previously completed course will be made by an examiner selected by the Marine Environmental Biology Program faculty.

### **Research Units**

BISC 790 Research units are normally taken whenever the student is conducting his/her doctoral research. Dissertation research will normally take the equivalent of about 2.5-3 years of full time work, but the number of research units taken usually does not reflect this. Typically advanced graduate students will take 6 units of 790 and possibly a 2-unit seminar each semester.

### **Grade Point Average Requirements**

The student must maintain a grade point average of at least 3.0 in all courses taken at USC, in conformity with regulations of the Graduate School; work graded C- or below is not acceptable for either subject or unit credit. In addition to the overall GPA requirement, students must achieve at least a B- in each core and skill course.

If a student's cumulative grade point average falls below 3.0 at any time, the student will be placed on departmental academic probation. The cumulative average must be raised to 3.0 by the completion of the next two semesters of registration at USC in courses approved by the student's guidance committee. Note: this may require that the student take additional formal and/or seminar courses since directed research and dissertation units are on a Pass/No Pass basis and are not computed into the GPA. If the student does not improve his/her overall GPA to 3.0 within this period, the student will be dropped from the program. A student who has been removed from probation but subsequently fails to meet the scholarship requirement is subject to termination (will be terminated) from the program.

### **Marine Program Noon Seminar Series**

Students must attend regularly the Marine Environmental Biology Noon Seminar series throughout their tenure at USC. In addition to attending other seminars, each student will present a 30-minute seminar on his/her current research once each academic year, beginning in their second year. A short written evaluation of the seminar will be provided by attending faculty to aid students in improving their public speaking skills. (See "Forms" section).

### **BISC 794 Doctoral Dissertation**

After a student successfully completes the Qualifying Examination (and is therefore a formal candidate for the Ph.D.), he/she must register for BISC 794 Doctoral Dissertation each semester except summer. The student would sequentially register for BISC 794a, 794b, 794c, 794d in the first four semesters after completing the Qualifying Examination, and then BISC 794z each subsequent semester as needed. The student must have at least 4 units of 794 credit, but can receive no more than 8; hence BISC 794a-794d are valued at 2 units and BISC 794z at 0 units.

### **Other Course and Unit Requirements**

Additional formal course requirements may be established by the Section and/or by the student's guidance committee and/or on advice of the committee, which evaluates the student's preparation in the Screening Examination.

The minimum number of units required for the Ph.D. by the Graduate School is 60. Units must include at least 4 units of BISC 794 credit (but no more than 8) and may be completed with other formal classes or BISC 790 work.

The student must be registered at USC during the semester that the dissertation is submitted.

### **Teaching Assistantship Requirement**

Graduate students pursuing the Ph.D. in the GPMEB must serve as a teaching assistant for at least two semesters; ideally, the student should serve in at least two different courses.

## Screening Examination

A Screening Examination is required by the Graduate School. The examination is oral, about one hour in length, and must be taken before the student has completed 24 units of graduate work at USC. The evaluation is administered by the Screening Committee. The purpose of the meeting will be to evaluate the student's preparation, determine competence to continue graduate study, and point out deficiencies to be remedied prior to the Qualifying Examination. Prior to the examination the student submits a 1-2 page document outlining his/her activities during the previous year and their present research interests. At the exam, the student presents a short (5-10 minute) description of their academic background and research interests.

The topics covered in the Screening Examination include:

- a summary by the student of their research while at USC
- biotic diversity, classification, and life histories
- organismal evolution and phylogeny; molecular evolution
- structure and physiology of cells and organisms
- biochemistry
- Mendelian, population, and molecular genetics
- biological, chemical, and physical oceanography
- statistics, experimental design, modeling and theoretical biology
- ecology and environmental sciences.

Each student's performance will be reported in writing to the student and a copy placed in the student's file.

## Guidance Committee

### Composition of the Guidance Committee

The student's program of studies is under the direction of a five-member guidance committee that must be established at least two semesters before the student takes his/her Qualifying Examination. Therefore the student should request appointment of the committee as soon as possible after the screening exam but certainly before the end of his/her third or fourth semester of enrollment in the Ph.D. program.

The composition of the guidance committee must meet the following guidelines:

- a) One member of the committee must be from a department at USC other than Biological Sciences. This "outside member" serves as the representative of the Dean of Graduate School.
- b) Normally, the other four members of the committee are tenure-track faculty of the Marine Environmental Program in the Department of Biological Sciences, but one of the members may be from another Program in Biological Sciences, and at least one must be tenured. The chair of the committee is called the student's advisor and must be from the Marine Environmental Program. Co-Chairs are normally not permitted unless required by the Graduate School (see next paragraph).

In exceptional cases of academic merit, a person not meeting the above guidelines may be approved by the Graduate School to serve on a Ph.D. committee. To request such an exception, the student must submit to the Graduate School a current Curriculum vitae of the proposed member and a letter from the chair of the committee citing the particular expertise of the person and the relevance of the requested appointment. A specially approved member may not serve as the outside member (see below) or as sole chair of the committee, but may serve as a co-chair with a regular faculty member of the Marine Environmental program. A guidance committee may include no more than one specially approved member unless the size of the committee is enlarged past five.

Request for changes in the composition of the Guidance Committee must be made in writing by the student to the Program. If approved, the committee is officially changed using the Graduate School's **Request for Change of Committee** form.

If the chair of the Guidance Committee is to be absent from the campus for any extended period of time (e.g., on leave) (s)he must appoint a temporary chair. The permanent chair will continue as a member of the Committee during his/her absence and will be in communication with the Guidance Committee. In the event that the permanent chair must be absent at the time of the Qualifying Examination or the defense of the dissertation, a petition for formal appointment of a temporary chair must be submitted to the Graduate School.

### **Responsibilities of the Guidance Committee**

The Guidance Committee (as such or as the Dissertation Committee that it becomes) is responsible for the guidance and evaluation of the student during his/her graduate tenure. Specific responsibilities include:

- a. Administration and evaluation of the Qualifying Examination.
- b. Approval of the student's research and academic programs.
- c. Monitoring the student's temporal progress in meeting degree deadlines.
- d. Evaluation of the dissertation in the Oral Defense

To meet these responsibilities, the Committee may require the student to make periodic written reports and should meet at least once per year with the student (one appropriate time for an annual meeting is shortly after the student's presentation at the Marine Noon Seminar series). More frequent meetings are usually necessary as the student approaches completion of his/her degree work. A request for a meeting may be made by the student or any member of the committee. Normally the student is responsible for arranging a specific date, time and place for meetings. The Chair should write minutes of all committee meetings and submit one copy each to the student, the members of the committee, and the Marine Program office for inclusion in the student's permanent file.

### **Qualifying Examination**

#### **Prerequisites for the Qualifying Examination**

During the semester the exam is taken, the student must be enrolled in a departmental graduate course or GRSC 800. The GPMEB requires that students have completed:

- a) All required core courses, each with a minimum grade of B-.
- b) At least two graduate seminars.
- c) The statistics research tool requirement.
- e) Removal of inadequacies noted in the screening examination.
- f) Completion of the **Request to Take Qualifying Examination** form.

Depending on how the above requirements were met, the student may have to take additional course work to satisfy the Graduate School requirements that students have completed at least 24 units of course work applicable to the degree while in residence and with a minimum cumulative GPA of 3.0.

#### **Timing of the Qualifying Examination**

The Qualifying Examination is normally taken during the student's fifth semester in the Ph.D. Program and must be taken before completion of his/her sixth semester.

#### **Components of the Qualifying Examination**

The Qualifying Examination consists of a written and an oral part, with both parts conducted and evaluated by the student's Guidance Committee.

## **The Written Examination**

The written examination will consist of four or five sets of questions distributed over two consecutive days. This examination can be taken on a laptop computer supplied by the committee chair (i.e., the student cannot use their own computer). Each Guidance Committee member (with the possible exception of the "outside member" whose participation is optional here) submits three questions; the student must answer two of this set, spending about equal time on each and having a maximum of two hours per set. The order in which the sets of questions are taken is at the student's option.

Questions will be comprehensive in scope with respect to the student's chosen area of specialization and will be designed to test the student's conceptual, analytical and integrative ability and preparation.

Each member of the Examination Committee will grade his/her question on a scale of 1.0-5.0 using 0.5 unit steps if necessary (1.0 as poor and 5.0 as exceptional). The examination result will be calculated by averaging all the grades. A mean score of 3.3 or above for all questions is passing; below 3.0 is failing. Cases where the mean is between 3.0 and 3.3 or where two or more questions are graded below 3.0 are evaluated by the Guidance Committee followed by a vote, using a secret ballot. More than one negative vote of the Guidance Committee will result in failure of the student to pass the written examination.

The written part of the Qualifying Examination must be taken before (normally 2 weeks before) the oral examination described below. The results of the written examination and the oral examination are given only at the completion of the oral examination.

## **The Research Proposition (The Fifteen Pager) and its Preliminary Approval**

### **Proposition Abstract**

At least two months before the anticipated date of the oral examination, the student should meet with his/her Guidance Committee and provide them with a 1- or 2-page Research Abstract of the anticipated research program to be presented in the Research Proposition. The purpose of this meeting is to ascertain whether the anticipated research constitutes a defensible dissertation topic so that the student does not develop a detailed plan for a research program that has serious flaws and probably cannot be successfully defended in the oral examination. If the committee has reservations, modifications that are mutually satisfactory to the student and the committee can be worked out during this meeting or the student can be asked to submit a revised or new abstract.

**Upon approval of the Proposition Abstract by the Guidance Committee, the student will develop it into a formal Written Proposition. This is to be in the form of a grant proposal and should include a short historical introduction, a statement of the problem and its significance, one or more hypotheses (if appropriate), the research design, anticipated results, methods to be used in interpretation of the results, and pertinent references. The treatment should be concise and should not exceed 15 double-spaced pages.**

## **The Oral Examination**

The oral examination will be in the area of the student's intended research and will be based on a research project selected and developed by the student into a Research Proposition.

The oral examination is usually taken two weeks after and must be taken within one month of the written examination. At least two weeks before the date of the oral examination, the student must submit one copy of the Research Proposition to each member of the Examination Committee and one copy to the Marine Program's Student Affairs Administrator for the student's permanent file.

The oral examination will be conducted and evaluated by the student's full 5-member Guidance Committee. Typically, the Committee meets briefly without the student to review the student's course work, other preparation and progress; to review the student's performance on the screening examination (copies of the student's transcript and Screening examination report should be obtained for each committee member from the Graduate Student Administrator by the Chair); and to agree on the exact format and order of questioning during the oral examination. Subsequently, the student typically presents the highlights of the research proposition in 15 minutes or less. Then members of the committee ask two or more rounds of questions. The questions are largely focused on the student's ability to conceive, conduct, evaluate of independent research and to communicate the results of such work. However, the oral examination is not limited to the context of the Written Proposition; as specific examples, questions are often asked a) from the written examination and b) concerning the removal of deficiencies identified during the Screening Examination.

On completion of the examination, the Guidance Committee meets in executive session (without the student) to evaluate the student's performance on the oral examination. Each member has one vote, either pass or fail. More than one negative vote will result in failure of the student to pass the oral examination.

At the conclusion of the executive session, the student is notified of the results on the two portions of the Qualifying Examination. Although one could pass both the oral and writtens, only one of these exams, or neither, the student passes the Qualifying Examination (as a whole) only if his/her performances on both the written and oral portions are satisfactory. If the student passes both the oral and written examinations, he/she is indicated to have passed the Qualifying Examination on the Graduate School form **Report on Ph.D. Qualifying Examination**.

If the student fails either the written examination or the oral examination or both, the committee must indicate that the student failed the Qualifying Examination on the Graduate School form **Report on Ph.D. Qualifying Examination**. The committee must make recommendations concerning the student's continuation in the graduate program. The committee usually grants the student a second chance to pass the failed portions (either part satisfactorily completed in the first examination does not have to be retaken), but may recommend that the student not repeat the exam or even deny a second chance (the latter action would be appealed to the Graduate School). The second attempt is a final one and can be taken no sooner than six months nor later than twelve months after the initial failure.

### **Admission to Candidacy**

After the student has passed the Qualifying Examination, the Guidance Committee recommends to the Graduate School that the student be admitted to candidacy for the Ph.D. Degree. Following admission to candidacy the student must register for BISC 794 Dissertation every semester, except summers, until the degree is awarded.

**The full Guidance Committee will be known as the Dissertation Committee after the Qualifying Examination has been passed (The GPMEB does not allow the reduction of the Guidance Committee to a three-member Dissertation Committee as permitted by the Graduate School except under special circumstances. If these circumstances are met, at least 2 members must be from the GPMEB).** The participation of all members of the Guidance Committee in the Dissertation Committee is indicated on the bottom of the form, **Report on Ph.D. Qualifying Examination**.

### **Research**

A student must undertake original investigation of a selected problem in marine biology or biological oceanography. Normally this is based on the Written Proposition as presented in the Qualifying Examination, subject to its acceptance by the student's committee. Any subsequent changes of research direction or content must be approved in advance by the student's advisor and the Dissertation Committee.

### **Research Prior to Admission to Candidacy**

Although the Graduate School regulations indicate that students cannot pursue research prior to their admission to candidacy, students in the GPMEB are encouraged to conduct research at their earliest opportunity. Ideally, this early research will develop into an appropriate dissertation topic. Certainly, the student will find it difficult to develop and defend a Research Proposition without significant exposure to research in general and the specific problem in particular. Such preliminary research should be based on a detailed plan prepared by the student and approved by his/her advisor.

### **Research Subsequent to Admission to Candidacy and its Relationship to the Written Proposition**

As noted above, dissertation research is normally based on the Written Proposition as presented in the Qualifying Examination, subject to its acceptance by the student's committee. Frequently, difficulties force revision of the planned study, but any such changes of research direction or content must be approved by the student's Dissertation Committee in advance.

### **Publication Prior to Submittal of the Dissertation**

Prompt publication of research results is very strongly encouraged in the GPMEB. Students should organize their research efforts into blocks that a) can be completed in sequence and b) represent topics for separate future papers so that submittal of one or more papers can be completed during their graduate tenure. Advisors often require that a student have submitted one or more papers before completing their dissertation.

Authorship of such papers is of significance. If the student is the sole author or if the student is the first author with the advisor as the only additional author, it implies that the student did most if not all of the research and hence the entire contents of the paper may be acceptable for incorporation into the dissertation. If the advisor contributed significantly to the research or if other individuals (other graduate students, faculty, post docs, research technicians, etc.) are co-authors, only that part of the paper which represents the student's work may be incorporated into the student's dissertation.

A published work may be incorporated into the body of the dissertation but may not be appended in the form of a reprint according to Graduate School regulations. The student is advised to seek the approval of the dissertation committee before submittal of a manuscript that is to be included in the dissertation since that committee must ultimately approve all contents of the dissertation. The fact that material has been submitted (accepted, published) does not mean that it will be allowed to be incorporated without revision by the committee.

### **Preparation and Defense of the Dissertation**

A dissertation represents a significant contribution to science that is based on an original research program completed by the student. Determination of the adequacy of the research program is the sole responsibility of the student's Dissertation Committee. Approval of the dissertation itself is primarily the responsibility of the student's Dissertation Committee, but the completed dissertation must also be examined by the Thesis Editor of the Graduate School to determine if it meets the grammatical standards and other requirements described in *Regulations for Format and Presentation of Theses and Dissertations* published by the University of Southern California and available at the University Bookstore. Additional regulations and information on the organization and preparation of the dissertation are provided in *Directions for Preparation of Dissertations and Research Reports as Required by the Graduate Program in Biology/University of Southern California*. Students should obtain a copy of both sets of regulations before they initiate their writing.

## (Preparation and Defense of the Dissertation—con't)

GPMEB students defend an advanced draft of the dissertation rather than a "final" copy typed on dissertation paper. The advanced draft should be complete, including all text, figures, tables, references, etc. and the draft must be in a suitable form for final typing. Before assembly of a complete draft is initiated, the student should confer with his/her full committee to determine whether adequate research has been completed.

The student's advisor is the individual responsible for determining whether or not a draft is sufficiently refined for distribution to the full Dissertation Committee. Portions or all of earlier drafts may be submitted to some or all of the committee members for suggestions and evaluation at any time. The thesis draft to be defended must be given to the Dissertation Committee at least one month prior to the thesis defense date.

The presentation and oral defense of the dissertation are achieved in a formal seminar that is open to all members of the academic community and a closed meeting of the student with his/her Dissertation Committee.

Since the final typed copy of the dissertation must be presented to the Office of University Publications at least three weeks prior to the end of the term in which the degree is to be granted and since the student must allow adequate time after the defense for corrections and final typing, the defense should be scheduled at least six weeks before the end of the term in which the student plans to graduate.

Before undertaking the Dissertation Defense, the student must have completed (or be in progress of completing) all other degree requirements.

The Chair of the Dissertation Committee is required to notify the Student Affairs Administrator of the Marine Program of the date, time, and place of the defense of the dissertation, so that a notice of the Dissertation Seminar and Defense may be distributed to all faculty and graduate students of the Department at least two weeks in advance. The date selected for this defense cannot be on an official University holiday (e.g., Labor Day, President's Day, etc.).

The open oral defense of the dissertation is achieved in a formal 50-minute "research" seminar such as would be given by a visiting scholar. The presentation is open to the public and the student should be prepared to answer all questions from members of the audience, including those on the Dissertation Committee. The period of questioning is not to be limited in time.

The dissertation is also subject to a detailed defense made before the full Dissertation Committee in a meeting that is usually held shortly after the conclusions of the seminar. At this meeting, which is typically two-three hours in length, the Dissertation Committee must critically evaluate the dissertation and determine whether or not it is to be accepted. To be acceptable, the dissertation must represent a major, original contribution to science.

Only members of the Dissertation Committee may vote whether to pass or fail the student (accept or reject the dissertation and its open defense in the seminar). A vote to pass the student must be unanimous and such a vote does not preclude that the committee may require modifications of the dissertation. Reasons for failure of the defense should be clearly identified by the committee and may include a) a flawed research plan, b) nonconclusive or inadequate research results, c) major deficiencies in the dissertation, etc. A student who fails the defense the first time is normally given a second opportunity, but any decision on re-examination is at the discretion of the Dissertation Committee.

If the defense is satisfactory and no major revisions of the dissertation are required, all members of the Dissertation Committee sign the **APPROVAL of DISSERTATION for FINAL TYPING** (green card) and this is submitted to the Graduate School. If significant revisions of the manuscript are required, the card is not signed until such revisions have been completed. The Chair of the Dissertation Committee may be assigned full responsibility for determining that the required revisions have been made, but some or all other members of the committee may request that they also be involved in the final approval.

## (Preparation and Defense of the Dissertation—con't)

If the green card for final typing is signed and dated by the drop/add deadline for FALL or SPRING, no further registration is required.

The student also needs to prepare an abstract of the dissertation for publication in "*Dissertation Abstracts, International*." The **DOCTORAL DISSERTATION ABSTRACT SUBMITTAL** form, signed by the Dissertation Committee chair, must be attached to the abstract and submitted to the Thesis Editor of the Graduate School.

The **SIGNATURE PAGE** is bound with the dissertation to verify that the dissertation has been approved by the Committee and accepted by the Graduate School. Signatures required on this form are those of the Committee and the Graduate School.

In addition to the original copy required by the Graduate School, one hardbound copy of the dissertation must be presented to the Department of Biological Sciences and another to the chair of the student's (Guidance and) Dissertation Committee.

The **TRIPLE CARD REPORT ON DISSERTATION & ORAL EXAMINATION for the Ph.D. DEGREE** must be signed by each Committee member, the Chair of the Department of Biological Sciences, the Thesis Editor, and the Graduation Counselor (for Dean of Registration & Records, GFS 315). The signed **TRIPLE CARD REPORT** signifies approval of the dissertation and defense by the committee, as well as acknowledging completion of all departmental degree requirements and all University degree requirements. Most important of all, it indicates that the degree has been cleared for conferral. The completed **TRIPLE CARD REPORT** is submitted to the Graduate School for approval.

The student must pay a Dissertation Fee for the microfilming and binding of the dissertation and publication of the abstract (see Tuition and Fees in the current University "*Catalogue*"). A copy of the receipt for payment of this fee must be submitted to the Thesis Editor.

The **DIPLOMA APPLICATION CARD FOR GRADUATE STUDENTS** notifies Registration and Records of how the student would like his/her name to appear on the diploma. This card must be completed and submitted to the Graduate School.

The **SURVEY OF EARNED DOCTORATES** must be completed and returned to the Graduate School for approval.

After approval by the Graduate School, the completed **TRIPLE CARD** is taken to the Degree Progress Department (SAS 010). Once this Department has signed the card, you have officially graduated!

**COURSES AVAILABLE IN MARINE ENVIRONMENTAL BIOLOGY**

BISC 582      Biological Oceanography (Core Course)  
(4 units)

BISC 584      Faculty Lecture Series  
(2 units)

BISC 585      Scientific Writing and Reviewing  
(2 units)

BISC 529      Marine Environmental Biology Seminar  
(1 unit; 4 units required, maximum)

BISC 532      Experimental Statistics

Seminars      (Offered on a rotating basis; check current Schedule of Classes)  
(2 units; 8 units required)

Plankton Biology  
Remote Sensing and Modeling  
Physiology of Marine Organisms  
Population Genetics of Marine Organisms  
Molecular Ecology  
Marine/Global N Cycle

## **'Quick Check List' of Student/Advisor Responsibilities**

### **First Month (Late Summer/Early Fall; ASAP, before classes get going)**

Each student meets with the "Screening Committee" (same composition as the Admissions Committee for that year, plus the student's advisor). This committee will be the same one that administers the Screening Exam at the end of Year 1. The Screening Committee evaluates each student's background and advises on courses to be taken in the first 1/2 years to develop each student's background in marine science (and specific area of interest).

### **By the End of Year 1 (Summer)**

Student completes the Screening Exam, which tests the student's general scientific knowledge, and identifies weaknesses that need to be addressed. The student will receive written comments from the committee on the "Screening Examination Results" form.

### **Beginning of Year 2 (Fall)**

Student and advisor compose and request appointment of a Ph.D. Guidance Committee, which meets with the student near the beginning of the second year. Prior to the meeting, the student submits a (at least) 1-2 page document outlining his/her proposed research. Following a brief presentation by the student, the committee provides feedback, which includes a second review of the student's coursework and training, and any appropriate recommendations for further course work or directed study.

### **Year 3**

The student must complete the Qualifying Examination (as described in "Requirements and Policies" document) by the end of Year 3. At least one month prior to the exam, the student completes the "Request to Take Qualifying Examination" form (located in folder). At least two months prior to the exam, the student must submit a thesis proposal (the fifteen-pager) to the Guidance Committee and obtain permission to proceed to the exam. The Chair of the Guidance Committee should obtain the student's file for the Qualifying Examination. A "Results of Qualifying Examination" form will be in the file for all committee members to sign. All committee members will continue as the student's Dissertation Committee.

### **Years 3-5**

Following successful completion of the Qualifying Examination, the Ph.D. Guidance Committee becomes the Dissertation Committee. The student meets *at least* annually with the committee. A short memo describing the students' progress (signed by all committee members) is submitted to the Section office following each annual meeting.

### **Additional Annual Requirements:**

**Yearly Seminar:** *Each student must present a 30-minute seminar once each academic year beginning in their second year.*

**Yearly Progress Reports:** *On or by September 1, each student will complete and submit to the Section office a brief progress report (signed by each member of their Guidance or Dissertation Committee) detailing their activities during the previous 12 months (courses taken, research undertaken, seminars given at USC and elsewhere, participation in cruises, etc.). Forms for these reports will be emailed to students each summer as a reminder.*

## Screening Examination—Marine Biology

Student's Name: \_\_\_\_\_

ID#: \_\_\_\_\_

Date of Screening Examination: \_\_\_\_\_

Pass \_\_\_\_\_ No Pass \_\_\_\_\_  
(See below)

Comments:

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Suggested Courses:

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Signatures of Committee Members:

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## Yearly Evaluation—Marine Biology

Student's Name: \_\_\_\_\_ ID#: \_\_\_\_\_

Student's Advisor: \_\_\_\_\_ Date: \_\_\_\_\_

Progress toward degree:

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TA Performance:

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## *Marine Environmental Biology Faculty/Staff*

NAME	EXTENSION	OFFICE	MAIL CODE	E-MAIL
Bakus, Gerald	x05790	AHF 130	0371	<a href="mailto:bakus@worldnet.att.net">bakus@worldnet.att.net</a>
Capone, Douglas	x02772	AHF 108	0371	<a href="mailto:capone@usc.edu">capone@usc.edu</a>
Caron, David	x00203	AHF 301	0371	<a href="mailto:dcaron@usc.edu">dcaron@usc.edu</a>
Duguay, Linda	x11335	AHF 209	0371	<a href="mailto:duguay@usc.edu">duguay@usc.edu</a>
Edmands, Suzanne	x05548	AHF 306	0371	<a href="mailto:sedmands@musc.edu">sedmands@musc.edu</a>
Fitzhugh, Kirk	763-3367	NatHistMus		<a href="mailto:fizhugh@usc.edu">fizhugh@usc.edu</a>
Fuhrman, Jed	x05757	AHF B4	0371	<a href="mailto:fuhrman@usc.edu">fuhrman@usc.edu</a>
Hedgecock, Dennis	x1-2091	AHF 125/130	0371	<a href="mailto:dhedge@usc.edu">dhedge@usc.edu</a>
Hendler, Gordon	763-3526	NatHistMus		<a href="mailto:hendler@usc.edu">hendler@usc.edu</a>
Iturriaga, Rodolfo	x05769	AHF B60	0371	<a href="mailto:iturriag@usc.edu">iturriag@usc.edu</a>
Jacobson, Myrna	x05145	AHF M240	0371	<a href="mailto:myrnaj@usc.edu">myrnaj@usc.edu</a>
Jones, Burton	x05765	AHF B58	0371	<a href="mailto:bjones@usc.edu">bjones@usc.edu</a>
Kiefer, Dale	x05814	AHF 342	0371	<a href="mailto:kiefer@usc.edu">kiefer@usc.edu</a>
Manahan, Donal	x05793	AHF 210	0371	<a href="mailto:manahan@usc.edu">manahan@usc.edu</a>
Martin, Joel	763-3440	NatHisMus		<a href="mailto:jwmartin@usc.edu">jwmartin@usc.edu</a>
Michaels, Anthony	x06780	AHF 232	0371	<a href="mailto:tony@usc.edu">tony@usc.edu</a>
Nealson, Ken	x12271	SCI 225	0740	<a href="mailto:knealson@usc.edu">knealson@usc.edu</a>
Pieper, Richard	310/519-3180	S.C.M.I.		<a href="mailto:pieper@usc.edu">pieper@usc.edu</a>
Popa, Radu	x12269	AHF 330	0371	<a href="mailto:rpopa@usc.edu">rpopa@usc.edu</a>
Thacker, Christine	763-3210	NatHisMus		<a href="mailto:thacker@nhm.org">thacker@nhm.org</a>
Valdes, Angel	763-3380	NatHisMus		<a href="mailto:avaldes@nhm.org">avaldes@nhm.org</a>
Ziebis, Wiebke		AHF 334	0371	
Zimmer, Russel	x05774	AHF 107D	0371	<a href="mailto:zimmer@usc.edu">zimmer@usc.edu</a>
<u>Marine Biology Administration</u>				
Bingham, Don	x05779	AHF 107E	0371	<a href="mailto:dbingham@usc.edu">dbingham@usc.edu</a>
FAX:	x0-8123	AHF 107		
<u>Biological Sciences Graduate Student Coordinator</u>				
Trusten, William	x07766	SHS 172	1340	<a href="mailto:trusten@usc.edu">trusten@usc.edu</a>
FAX:	0-8631	SHS 172		

### *Marine Environmental Biology Students*

NAME	PHONE	LAB	E-MAIL
Chinen, Ann Marie	x09698	AHF 306	<a href="mailto:achinen@usc.edu">achinen@usc.edu</a>
Countway, Peter	x12123	AHF 301	<a href="mailto:countway@usc.edu">countway@usc.edu</a>
Finzi, Juliette (Ocean Sciences)	x11431	AHF 104	<a href="mailto:finzi@usc.edu">finzi@usc.edu</a>
Flood, Beverly			
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