

A CHECKLIST OF FACULTY AND STUDENT RESPONSIBILITIES
ECOLOGY GRADUATE STUDENT ASSOCIATION
GRADUATE GROUP IN ECOLOGY
SUMMARY

These guidelines were prepared by the Mentorship Committee of the EGSA as part of the overall student review of the Ecology Graduate Group conducted during the 1997-98 academic year. Specific recommendations found in the document were drawn from committee members' own experience, informal discussions with other graduate students, and from interviews with six GGE faculty members selected for their reputation as good mentors. Two additional faculty members helped with comments on the final draft. The guidelines were formally adopted by the Executive Committee of the GGE in Spring 1998.

Although we avoided making a critique of mentoring in the original document, a few comments here might serve as background for our recommendations. While we discovered that there are a fair number of truly excellent mentors in the group and only a couple of unacceptable mentors, the comment that we heard most often is that of being forgotten by faculty members who are more interested in their own research. In some respects this problem is more prevalent at UC Davis than at other universities since faculty members have so many other interesting faculty members with whom they can interact as opposed to their graduate students. Thus, our overall recommendation is for faculty members to remember that graduate students are not solely a burden, or a source of labor, but that graduate students have value as their closest colleagues in terms of research interests. Of course, most faculty members value their students but are perhaps overwhelmed by the many demands made on their time. However, even benign neglect leads to low achievement. Thus, one purpose of these guidelines is to remind faculty members of what is expected of them as a good mentor. Similarly, we wish to remind graduate students of what their obligations are and what they should expect from their Major Professor/FM. Graduate students should be encouraged to use this document as a forum for initiating communication with their Major Professor, or as validation of their decision to change Major Professor.

Many of our specific recommendations revolve around improving communication between faculty and student. Among other things, faculty need to let students know what funding they can provide, initiate discussions about authorship of papers, and keep students informed about their schedules in advance. Similarly, students need to let faculty know in advance what their needs are, that they will be needing a letter of recommendation in the next month, etc. Beginning students may not understand what their responsibilities are and can benefit from a frank discussion of what is expected of them.

Other recommendations for faculty members are more abstract and involve mentoring rather than simply advising. The highest achieving students are those whose Major Professors guide their students through the transition from undergraduate to independent researcher. This happens by providing advice appropriate to the students' stage of research and degree of independence, and also varies from student to student. It also involves faculty members truly engaging with their students' research. Finally, good mentoring means **actively** looking out for a students' interest by guiding their choice of research topics, helping them gain initial research experience, helping them to network, referring papers to them, suggesting they apply for grants. While students have the responsibility to meet goals set by faculty members, faculty should also note that the best responses are achieved through guidance, suggestions, teaching and encouragement.

A CHECKLIST OF FACULTY AND STUDENT RESPONSIBILITIES

Faculty members and students are individuals and, therefore, no set of rules, suggestions, or expectations is universal. In an attempt to further an overall "culture of mentoring", we have drawn together themes that came up repeatedly in discussions with faculty members and graduate students. These are organized into two sections; graduate student expectation of faculty members, and faculty expectations of graduate students. Hopefully, these will encourage better, more productive communication and enhance faculty-graduate student relations.

GRADUATE STUDENT EXPECTATIONS OF FACULTY MEMBERS (FMS)

We include three general principles of mentoring here:

Students are here for an education. Thus, their development into good ecologists is dependent on their receiving guidance, assistance with acquiring funding for research and access to the FM's expertise and network of contacts.

The FM should know the critical mass of students that s/he can support given the other obligations on FM's time. Advising graduate students does not always have the tangible deadlines of many of the other obligations of the FM, but graduate students need to be considered as an obligation and given a certain priority.

In addition, it should be recognized that students have individual needs and thus, FM's should tailor their approaches to each student.

Prior to Acceptance:

Prospective students should meet not only with all potential FM's but also with their students. Prospective students should carefully consider what kind of support package is offered and those without a master's degree should plan on applying for the NSF Pre-doctoral Fellowship during their first quarter at Davis.

Beginning Graduate Students:

Upon arrival at UCD, FM and student should discuss mutual expectations. Specific topics to be covered could include percentage of time spent on courses vs. research, courses to take, teaching responsibilities, time-to-degree, development of research project, current research the FM is supervising or engaged in, and availability of funding, equipment, and assistance. This is also a good opportunity for the FM to explain his or her general philosophy of mentoring. New students should also be introduced to all current advisee's of a FM and told what they are doing. Students also find it helpful to be informed about relevant seminars and events that are sponsored by other graduate groups or departments.

FM should schedule meetings with the laboratory and/or individual students regularly. Students may need to meet with increased frequency as they switch from coursework to research and are developing ideas. The FM should be aware of and respond to this. In addition, the FM should also be aware that beginning students need to be socialized into the culture of the university and can greatly benefit from regular interactions with faculty and older students. Interruptions should not be allowed during meetings with students.

FM should actively participate in funding a student. Ideally, a FM can fund all of their students. If not, they should direct them toward appropriate funding sources and assist them in preparing grant/fellowship/scholarship applications. They should also discuss work-study options and assist students with teaching assistantships available to the FM. Even if a student is funded, earning a competitive scholarship or fellowship is prestigious and hence, FM should encourage competitive students to apply for such funding. At all

times, the FM should be aware of the status of all of their students in terms of funding (what kind of funding are they receiving and for what duration?).

FM should be aware of students' analytical skills and should encourage students to strengthen skills in data analysis and project design, including assisting students in selecting applicable statistics and methods courses. FM should recognize that statistics courses may not be completely adequate for the data analysis planned and should assist in preparing the student for 'real-world' analysis.

Where possible, FM should arrange for 1st- or 2nd-year students without a defined research project to assist higher level students, or to work on a small-scale project of their own. This provides an opportunity to answer a simple question while exposing them to current techniques and questions in their field. Small projects are also great confidence builders for students who have not been previously engaged in research. Such arrangements would need to take into consideration the courseload of the student.

Moving From Coursework to Dissertation Research:

Many students would like to choose their research project but would like to do so with the guidance of their Major Professor. A major responsibility of the FM is to insure that the project is theoretically sound and physically feasible given the time and money constraints under which it will occur and the ultimate degree goal of the student. The FM should be continually evaluating the project with the student and should be willing to assist the student in changing its direction if the current path seems fruitless. He or she should also remember that the costs of pursuing an ambitious but risky project may be higher for the student than for him/herself. The FM should also be aware that it may be (subconsciously) tempting to keep a good student here at Davis for a longer period of time than is beneficial for the student, and thus the FM should be careful about diverting such students with extra projects.

The FM should discuss with the student the project time frame, equipment and supply requirements, assistance (funding and people power) available, publications/manuscripts to result from it, and possible collaborations, along with suggesting previous articles to read or people to contact for more information. Authorship should be discussed explicitly at the beginning of any collaborative project. As the project proceeds, FM should be available for advice on data analysis, interpretation of research results, and manuscript preparation. The FM should also help students build a network of research contacts, suggesting experts in the field that the student can contact and introducing the student to other participants at meetings.

FM should participate in choosing students' committee members and, as the chair of the guidance and dissertation/thesis committees, should be aware of whether meetings are occurring at an appropriate frequency (on at least an annual basis prior to the annual progress report process). If not, they should inform the student of this lapse.

FM should inform students in a timely fashion on matters of meetings, research opportunities, funding, and long-term absences (e.g. sabbaticals). On the issues of funding and long-term absences, a timely manner is a matter of some months so that students can attempt to find funding if necessary, and can arrange their research and academic schedules to conform to their advisor's absence. FM should also inform students of their lack of availability due to travel, looming deadlines, etc.

Preparing for the Job Market:

FM should know what the student plans to do after graduation and should encourage participation in activities that will increase the student's marketability. The FM can help to develop presentation skills by having students present their research at lab meetings or AOE seminars on at least an annual basis after students have begun collecting data. In addition, FMs can greatly assist students by helping them obtain funds to present their research at professional meetings, and by assisting them with preparation of their poster or platform presentation. If possible, FM should give students the opportunity to referee journal articles.

FM should require that the student has some experience writing applications for funding given the future likelihood that the student will need to apply for support in their next position. The FM should review students' funding applications, manuscripts, etc. and should write letters in support of their students. FM should suggest other reviewers for manuscripts, etc. if appropriate.

FACULTY EXPECTATIONS OF GRADUATE STUDENTS

Some general principles include:

Students should remember that they are responsible for their education, and should make every effort to be informed about relevant university policies, research and funding opportunities, etc. Students should also realize that it is to their own advantage to follow the graduate group rules (e.g. scheduling committee meetings, filing progress reports, etc.) since these are written with the students' best interests in mind. In addition, following the rules can be a way for students' to gain faculty attention. Students should respect the other obligations that their major professor has. Students should try to avoid ASAP requests, and utilize methods of communication that are most effective for keeping faculty members updated on needs and deadlines on a regular basis while being somewhat unintrusive (e.g. via e-mail). Students should communicate their needs to FM's. The earlier on in the program that a student can communicate to the FM what additional help they need, the better the prospects for a productive faculty-student relationship.

Beginning Graduate Students:

Students should have expectations for their degree program and should discuss these with the faculty member soon after starting, and during the course of the program. Topics could include percentage of time spent on courses vs. research, courses to take, teaching responsibilities, time-to-degree, ideas for research, availability of funding, equipment and assistance in general terms, career goals, and skills they expect to learn.

Students should remain informed on issues pertaining to their academic program and should act to make progress in that program. They should be aware of classes they need to take, deadlines for registration, form-filing and qualifying examinations, and what GGE and AOE requirements they are expected to have fulfilled at the end of each year in the program. Students should be responsible for requesting faculty to serve on their committees and for organizing committee meetings at appropriate intervals. They are also responsible for learning what is required of them on qualifying and/or thesis exams.

Students should initiate meetings with major professors when necessary. It is the responsibility of the student to keep the faculty member informed of matters that occur between regularly scheduled meetings and need to be discussed. Students should attend lab meetings in order to maintain relationships with the major professor and other students in the laboratory. Students should make a presentation of their research at laboratory meetings to practice for professional meetings, and to gain new insight into interpretation of their results. If serving as spectators, students should offer their opinions and advice to presenters. Both inside and outside the laboratory meeting, interacting with other students and discussing work could provide a more fruitful approach to research. In addition, students should participate in coursework, journal clubs, workshops and/or additional lab work that strengthen their knowledge of the methodology and common statistical analyses used in their field.

Students should come to an understanding with their major professor regarding funding. If funding is not guaranteed, they should attempt to share the funding responsibility with the faculty member. This mainly entails applying for appropriate funding when available and filing the forms that allow a student to be eligible for federal

financial aid. Both the student and faculty member should be searching for funding opportunities in this situation and the student should apply for those funds suggested by the faculty member. The student should be willing to teach under most circumstances and should pursue positions in departments where they are qualified. Students should recognize that teaching in excess of two quarters per year may have a deleterious effect on progress to degree but that the student may be asked to do so under a funding deficit. Either the student or faculty member should keep track of work-study possibilities. If a faculty member suggests that a funded student apply for funding because it will enhance the student's reputation or will aid the faculty member with future funding deficits, the student should do so with the understanding that their previous funding is not forfeit if they are unsuccessful.

Students should realize the importance of remaining within their faculty member's area of expertise in order to maximize opportunities for both successful funding and research projects. Faculty members with funding opportunities in the forms of RA's, etc. are often limited by the granting agency in terms of how they can apply them. Therefore, students should recognize these limitations and understand that it may be best if they formulate a reasonable research project under the umbrella of an already funded or soon-to-be funded proposal. Another possibility is that the student, working within the faculty member's area of interest, formulates a grant application with the faculty member. The further a student strays from the major professor's area, the less likely they will receive much-needed help from the professor (beyond funding) and the more likely they will be unable to integrate into the structure of the laboratory.

Moving From Coursework to Dissertation Research:

Students should take the initiative when developing a research project. Individual students and major professors will make their own arrangements but students should realistically initiate work on the research project before finishing coursework. Students should develop ideas for research and complete preliminary literature searches to determine a viable project. The student should involve the major professor in determining which ideas should be developed further given the current state of the field, equipment and funding availability, and the expected time to degree. Students should be responsible for designing the project and determining methodology with the assistance of the major professor. At the same time, students should be mindful of their own best interests and be cautious about taking on projects that have a high chance of failure however glamorous. Similarly, they should be wary of taking on extra projects that delay their graduation, or, of being pushed into taking oral qualifying exams before they are ready.

As research progresses, students should keep current with developments in their field and they should regularly update and request feedback from major professors. They should also be aware that initial estimates of the time required for data analysis and write up of the dissertation are always far too short. For this reason, they should be receptive to the FM's comments in this regard, and should be willing to meet intermediate deadlines imposed by the FM.

More advanced students should be willing to act as a resource for newer students in their laboratory. By acting as a co-mentor to newer students, students will be participating in a teaching experience and exposing themselves to potentially new and different angles on research and theory in their field.

Preparing for the Job Market:

Students should collaborate with others (students or faculty) when appropriate. Working with others in one's field will most likely enhance the research being conducted and will set the groundwork for future contacts and networking. Students should also seek out the advice of outside experts in their field for the reasons listed above and should present their research at local and/or national meetings of professional societies.

It is critical that students make all possible efforts to complete the dissertation/thesis before departing UC Davis for another position. Along the same lines, students should attempt to prepare their dissertation for publication prior to starting a new position, or submit manuscripts as each piece of research is completed rather

than waiting to finish the entire dissertation. Students should also consider the advantages of writing a “three paper dissertation” but note that faculty opinions about this option differ.

CONCLUSION

Graduate school is first and foremost about the education of students. Thus, graduate students should remember that, ultimately, they are responsible for their education. Faculty members should remember that their responsibility is to guide, advise, suggest and teach.

EGSA Mentorship Committee:

Gail Dethloff
Eddie Gilmartin
Carolyn Lundquist

Lore Ruttan
Eric Sanderson

Faculty Advisers:

Catherine A. Toft
Dirk Van Vuren

Revised: August 1998