

# **Graduate Program Handbook**



**SACRAMENTO  
STATE**

## **Department of Biological Sciences**

*California State University, Sacramento*

*Revised 1/2009*

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## I. Application for Admission

All applicants to the graduate program must be admitted both by the Department of Biological Sciences and by the university; hence, admission is a two-stage process. Therefore, applicants must apply to the Department of Biological Sciences to determine eligibility for admission to the department's graduate program and to the Office of Graduate Studies to determine eligibility for admission into the university. *Note:* an applicant who is accepted into the department's graduate program but is not admissible to the university will be denied admission.

### A. New Applicants

1. University and department applications must be completed by **February 15** for admission in the fall semester. Applications for admission to the Graduate Program in spring semesters are no longer being considered.
2. To apply to the Department of Biological Sciences Graduate Program, the applicant must submit all of the following application materials by the posted deadline (see section I.A.1 above) to: Graduate Secretary, Department of Biological Sciences, 6000 J Street, Sacramento, CA 95819:
  - a. an online [department application](#) form for admission
  - b. one set of unofficial transcripts (i.e., copies ok) from all colleges and universities attended, other than Sacramento State;
  - c. GRE General Test scores;
  - d. two letters of recommendation; and
  - e. a statement of purpose.
3. To apply to the university, the applicant must:
  - a. fill out and return an online university application form for admission;
  - b. pay the application fee; and
  - c. submit transcripts to the Office of Graduate Studies. (Website is located at [http://www.csus.edu/gradstudies/appinfo\\_guidelines.htm](http://www.csus.edu/gradstudies/appinfo_guidelines.htm)).

### B. Students with Post Baccalaureate Status

1. Students who have been accepted to the university and have received "Classified" or "Unclassified" Post Baccalaureate status must apply to the Department of Biological Sciences for admission to the Graduate Program as described in section I.A.2 above.
2. If accepted into the Graduate Program, these students must also submit a *Classification Application* form (available from the Department office (SQU 202).

*Note:* Students who have submitted official transcripts to the Department of Biological Sciences within two years of first acceptance into the university do not have to submit transcripts again, except for transcripts showing coursework taken at other academic

institutions during this period. Students must meet the same application deadlines as new applicants (i.e., Section I.A.1).

### **C. Students Seeking Readmission**

1. Classified graduate students who have not been Advanced to Candidacy for the Master's degree may be absent for one semester without having to apply for readmission. Classified graduate students who do not maintain continuous enrollment (an absence for two or more semesters) must apply for readmission following the same procedure and meeting the same deadlines as new applicants (see Section I.A).
2. Students who have Advanced to Candidacy for the Master's degree must maintain continuous enrollment until they graduate.

## **II. Department Requirements for Admission**

### **A. Admission of Graduating Seniors**

1. After Spring/Fall graduation, the Graduate Coordinator will verify that CSUS students have successfully completed their final semester and have graduated. Non-CSUS students must submit final transcripts for this purpose to the Graduate Coordinator. Such transcripts are submitted to the Graduate Coordinator through the Department of Biological Sciences, not the Office of Graduate Studies.
2. The Graduate Coordinator is responsible for notifying the Office of Graduate Studies that the student has satisfied admission requirements and for requesting that the student receive "Classified" status.
3. The policies stated in section VII.A. 1 and 2 do not apply to these students.
4. If a graduating senior does not fulfill the requirements for Classified status but did graduate, the procedures described in part C or D of this section, whichever is appropriate, must be followed.

### **B. Admission with Graduate "Classified" Status**

Admission to the Department's graduate program with "Classified" status (full graduate standing; no deficiencies) requires completion of all of the following at the time of admission:

1. a baccalaureate degree;
2. a major in biological sciences or closely related field; OR 24 units of upper division biological science courses or courses in closely related fields, each of which must be passed with a "C-" or better;
3. a GPA of 2.75 or better in all biology courses AND a GPA of 3.0 or better in upper division biology courses;
4. GRE General Test scores;
5. a faculty member who has agreed to serve as the applicant's thesis advisor (i.e., Major Professor);

6. two letters of recommendation from persons qualified to judge the applicant's potential for successful graduate study; and
7. a statement of purpose;

*Note:* Submission of GRE Subject Test scores (either Biology or Biochemistry, Cell and Molecular Biology scores are acceptable) is optional and may be submitted at the discretion of the applicant.

Meeting all admission requirements is no guarantee of acceptance into the graduate program. Students who have deficiencies in admission requirements that can be removed by specified additional preparation, or who have not been sponsored by a major professor (thesis advisor), may be admitted with conditionally classified graduate status. Admission as a conditionally classified graduate student does not guarantee fully classified status. Fully classified graduate status is conferred when all deficiencies identified at the time of admission are removed and a biology faculty member has agreed to serve as the student's major professor. Any deficiencies in admission requirements will be noted on a written response to the admission application.

It is important to note that a faculty member is under no obligation to accept a graduate student into their lab. Indeed, it is the student's responsibility to obtain the agreement of a biology faculty member to serve as their thesis advisor. If by the end of their fourth semester in the graduate program a student has not obtained a thesis advisor (i.e., Major Professor), the student will be disenrolled from the graduate program.

### **C. Admission with Graduate “Conditionally Classified” Status**

Conditionally Classified status applies to students who are accepted into the program but who have one or more of the following deficiencies at the time of admission:

1. Deficiency in upper division biological science coursework of no more than 6 semester units.
2. Deficiencies in GPA requirements. Applicants with GPAs below those listed in Section II.B.3 but who meet the university's minimum GPA requirement (see Section II.D.3. below) may be admitted at the discretion of the Graduate Committee; however, admission with a GPA deficiency may only occur if a faculty member sponsors the applicant's admission.
3. Lack of sponsorship by a faculty member.

A graduating senior who will qualify for Classified status *upon successful completion of his/her final semester* will be given Conditionally Classified status at the time of admission.

A student who is given Conditionally Classified status has all the rights, privileges, and responsibilities of a student who is given Classified status. A student who is given Conditionally Classified status simply has minor deficiencies in his/her coursework or admission requirements that must be fulfilled within two semesters of entering (enrolling in courses) in the Biological Sciences graduate program.

Once a student is given Conditionally Classified status, he/she must receive grades of B- or better in any Biology courses taken to remove coursework deficiencies; otherwise, the course

must be repeated. Units taken to make up deficiencies cannot be used to meet requirements for the Master's degree. Students can apply (i.e., transfer) up to 6 units of coursework toward their graduate program units as long as these units have not been used to satisfy the requirements of a prior degree.

Once a Conditionally Classified student has fulfilled his/her deficiencies, he/she must submit an *Application for Classification* form and attach appropriate evidence showing that the conditions have been met (e.g., transcripts, letter from faculty advisor). This form is available in the department office or online at: <http://www.csus.edu/gradstudies/forms.htm>.

## **D. Denial of Admission to the Graduate Program**

Even if a student has met all of the department's admission requirements, admission to the program is not guaranteed.

Admission to the Department's graduate program is automatically denied if any of the following requirements are not met:

1. A baccalaureate degree;
2. At least 18 units of upper division courses in Biology; or
3. A minimum GPA of 2.5 in the last 60 semester units (or 90 quarter units) of coursework (University admission requirement).

## **III. Financial Aid and Employment**

### **A. Scholarships, Grants, and Loans**

Eligible students may receive financial aid in the form of a) scholarships, which are awarded on the basis of academic achievement and do not have to be repaid; b) grants, which are awarded on the basis of financial need and do not have to be repaid; and/or (c) loans, which are awarded on the basis of financial need but must be repaid.

Students who are interested in applying for financial aid should consult with the CSUS Financial Aid Office in Lassen Hall.

### **B. California State Graduate Fellowships**

Information and application forms for California State Graduate Fellowships are available from the Office of Graduate Studies.

### **C. Department Scholarships**

The Department currently awards a number of scholarships each year. Interested students should check the Department of Biological Sciences website (<http://www.csus.edu/bios/Scholarships.html>) or inquire in the Department of Biological Sciences office (SQU 202) to see which scholarships are available and learn about the application procedures.

## D. Graduate Assistants

The Department of Biological Sciences does not currently offer graduate assistantships. However, students who are interested in employment as student assistants should inquire in the Department of Biological Sciences office (SQU 202), as these positions are open to both undergraduates and graduate students.

## E. Graduate Teaching Associates

In order to provide graduate students with teaching experience, the Department of Biological Sciences has developed a Graduate Teaching Associate (GTA) program. Once accepted into the GTA program, students will be paired with a faculty member to team teach an undergraduate laboratory section for one semester. Upon successful completion of this, a GTA becomes eligible to teach undergraduate laboratory sections independently and is recorded as the instructor for the lab section.

Information concerning the nature of the GTA program, application procedures, and salary information is available in the Department of Biological Sciences office.

Students who wish to participate in the GTA program must apply for admission to the program prior to December 1 of the preceding academic year in which they would like to teach.

## F. Funds for Thesis Research

Currently, the department is unable to provide funds to graduate students for their thesis research. However, financial support may be available through the student's major professor or through external grants. Students are encouraged to inquire about such opportunities for funding with their major professor.

## IV. Degree Information and Requirements

The MS degree requires completion of 30 units of course work with a minimum 3.0 GPA. The 30 units must include a minimum of 18 units of 200-level courses. No units from BIO 106, BIO 108, BIO 194, BIO 195, BIO 197, BIO 198A, BIO 198B, or BIO 199 are acceptable toward the Master's degree. No more than 6 units combined of BIO 299 and BIO 500 may be applied toward the 30 unit requirement.

Each student who receives a Master's degree from the Department of Biological Sciences must submit a thesis based on original research in biology. A thesis can be based on either of the following sources of data:

1. data generated by the student's original research in which the student performs the fieldwork or laboratory experiments; or
2. data obtained from sources other than the student's own fieldwork or laboratory experiments, provided the data are analyzed in a manner in which they were not previously analyzed.

The use of data must result in an original contribution to the problem being investigated.

All requirements for the Master's degree must be completed within seven years starting from the time the first course is used to meet the Master's degree requirements.

Students who successfully complete the requirements of the Department of Biological Science graduate program will receive a degree entitled *Master of Science in Biological Sciences*.

Three options are available to students who seek this degree; a general course of study, *No Concentration*, and two specialized courses of study, *Concentration in Biological Conservation* and *Concentration in Molecular and Cellular Biology*.

## A. University Requirements

1. A minimum of thirty (30) units of academic credit is required for a Master's degree.
2. Units taken to remove admission deficiencies of any type, such as deficiencies in courses or GPA, cannot be used to meet requirements for the Master's degree.
3. Up to six (6) units taken while in Post Baccalaureate Unclassified status are permitted by University policy to count toward requirements for a Master's degree. The Department of Biological Sciences has stipulated further that course credit may not be earned toward the Master's degree until the student is accepted into the graduate program.
4. Lower division units may not be used to meet requirements for a Master's degree; however, upper division undergraduate courses may be used to meet degree requirements.
5. The thirty (30) units of academic credit that are used to meet degree requirements must include a minimum of eighteen (18) units of 200-level (i.e. graduate) courses.
6. A minimum of twenty one (21) units must be earned in residence at CSUS.
7. A minimum of twenty (20) units must be earned in the major field (Biological Sciences).
8. Classified or conditionally classified graduate students must maintain a cumulative and semester grade point average (GPA) of at least 3.0 to remain in good standing. A semester GPA of less than 3.0 will result in Academic Warning. If while on Warning a student earns a semester GPA of less than 3.0, the student will be subject to Academic Dismissal (or Disqualification). Grades of C and C+ may be used provided that the cumulative and semester GPA is not less than 3.0. Courses in which a student earns a grade of C- or less may not be used to meet degree requirements.

## B. General Department Requirements

These requirements must be fulfilled by all students seeking a Master's degree in Biological Sciences:

1. Course Requirements
  - a) Thirty (30) units of academic credit are required for a Master's degree in Biological Sciences. The thirty (30) units of academic credit that are used to meet degree requirements must include the following graduate core courses (5 units total):
    - Bio 220 Research Methods in Biological Sciences (2 units)

Bio 221A Cell and Molecular Methods and Techniques OR Bio 221B Methods in Ecology, Evolution and Conservation (2 units)  
Bio 294 Seminar (1 unit).

- b) No more than four (4) units of Bio 299\* may be used to meet the degree requirement of 30 units of academic credit.
- c) Units for Bio 299 cannot be used to meet the University's requirement of a minimum of 200-level courses.
- d) The 30 units of academic credit that are used to meet degree requirements must include two (2) units, and only two units, of Bio 500. This course is taken during the semester in which the student is completing their written thesis.
- e) Units from Bio 106, 108, 194, 195, 197, 198 and 199 may not be used to meet degree requirements.
- f) Students are strongly encouraged to examine their career goals and select appropriate courses from supporting fields in other departments and other academic institutions if appropriate. In order to count units from supporting fields and other academic institutions toward the 30 units required for a Master's degree, the student must show that the courses from outside the Department are relevant to his/her graduate program and are not available in the Department's course offerings.

Courses from supporting fields and other academic institutions can only be approved at Advancement to Candidacy (i.e., by the student's Supervisory Committee and the Graduate Committee) or by appropriate petition to the Graduate Committee after Advancement to Candidacy has occurred. Examples of supporting fields are: Chemistry, Physics, Mathematics, Geology, Psychology, and Anthropology.

*\*Note regarding Bio 299:* While only 4 units of Bio 299 may be used toward the Master's Degree, students must enroll in Bio 299 each semester during which they are actively engaged in their research.

## 2. Thesis Requirement

A thesis is required of all students who plan to receive a Master's degree in Biological Sciences. See section IX for information concerning the nature of the thesis. See section VI, part E, for information on the nature of the thesis research.

## 3. Thesis Seminar Requirement

Each student who plans to receive a Master's degree in Biological Sciences must give an oral presentation (thesis seminar) of his/her thesis prior to receiving the degree. See section X for information on the thesis seminar.

### C. Additional Department Requirements for the No Concentration

Each student must include in his/her course of study, both of the following courses (6 units total); Bio 282 Evolution (3 units), and Bio 292 Biological Concepts (3 units), and 17 units in approved electives.

### D. Additional Department Requirements for the Concentration in Biological Conservation

1. Each student must include in his/her course of study, both of the following courses (6 units total): Bio 282 Evolution (3 units), and Bio 292 Biological Concepts (3 units).
2. Each student must include in his/her course of study, at least one of the following courses (3 units total): Bio 214 Advanced Plant Ecology (3 units), Bio 260 Population and Community Ecology (3 units), or Bio 269 Behavioral Ecology (3 units).
3. Each student must include in his/her course of study, at least two of the following courses (5 to 6 units total): Bio 270 Conservation Policy and Administration (2 units), Bio 273 Advanced Fishery Biology and Management (3 units), or Bio 279 Conservation Biology and Wildlife Management (3 units).
4. Each student must include in his/her course of study, 8 to 9 units total from the following list of elective courses (Other courses may be taken to meet this requirement if the courses are approved by the student's Major Professor; may not include Bio 106, 107, 195, 197, or 199):

Bio 111 Land Plants: Evolution, Life, and Times (3 units)  
Bio 112 Plant Taxonomy (4 units)  
Bio 117 Field Botany and Vegetation Inventory (3 units)  
Bio 157 General Entomology (4 units)  
Bio 162 Ichthyology (3 units)  
Bio 164 Herpetology (3 units)  
Bio 165 Vertebrate Natural History (4 units)  
Bio 166 Ornithology (3 units)  
Bio 167 Quantitative Methods in Biology (3 units)  
Bio 168 Mammalogy (3 units)  
Bio 172 Aquatic Entomology (3 units)  
Bio 175 Aquatic Pollution Assessment (3 units)  
Bio 283 Biogeography (3 units)  
Bio 293 Research Conference (2 units)  
Bio 299 Problems in Biological Sciences (no more than 4 units)

### E. Additional Department Requirements for the Concentration in Molecular and Cellular Biology

1. Each student must include in his/her course of study, both of the following courses (6 units total); Bio 222 Molecular Biology (3 units), Bio 224 Genomics, Proteomics, and Bioinformatics (3 units).
2. Each student must include in his/her course of study, at least two of the following courses (5 to 6 units); Bio 223 Human Molecular Genetics (3 units), Bio 245 Host/Pathogen Interactions (3 units), or Bio 247 Contemporary Topics in Immunology (2 units).

3. Each student must include in his/her course of study, 11 to 12 units total from the following list of elective courses (other courses may be taken to meet this requirement if the courses are approved by the student's Major Professor; may not include Bio 106, 107, 195, 197, or 199):

Bio 104 Physiology of Human Reproduction (3 units)  
Bio 127 Vertebrate Embryology (4 units)  
Bio 132 Neurophysiology (3 units)  
Bio 143 General Virology (3 units)  
Bio 144 Pathogenic Bacteriology (4)  
Bio 149A Immunology and Serology Lecture (2 units)  
Bio 181 Molecular Biology Laboratory (2 units)  
Bio 185 Topics in Biology (3 units)  
Bio 186A Cell and Molecular Biology Seminar (1 units)  
Bio 282 Evolution (3 units)  
Bio 292 Biological Concepts (3 units)  
Bio 293 Research Conference (2 units)  
Bio 299 Problems in Biological Sciences (no more than 4 units)  
Chem 164 Macromolecular Lab. Tech (3 units)  
Chem 245 Computational Chemistry (3 units)  
Chem 260 Protein Biochemistry (3 units)

## V. Advising

### A. Major Professor

1. The term "Major Professor" is the term used by the Department of Biological Sciences to identify the Department of Biological Sciences faculty member who has agreed to supervise the student's thesis research and guide the student in developing their course plan. This term will be used in this document. Equivalent terms used by the Office of Graduate Studies and elsewhere in this document are "Faculty Advisor", "Thesis Advisor", and "Thesis Committee Chair".
2. The student's Major Professor must be a full-time, tenured or tenure-track faculty member at CSU Sacramento.
3. Faculty in the Department of Biological Sciences are automatically eligible to serve as Major Professor. Faculty outside the Department of Biological Sciences must first be approved by the Graduate Committee in order to serve as Major Professor. Outside faculty members must be approved separately for each committee on which they intend to serve as Major Professor.
4. Acceptance by a Major Professor is not automatic; a faculty member is under no obligation to accept a student as an advisee. Several faculty members have more graduate students than they have time to supervise. Students who wish to conduct their thesis research in the research area(s) of an already overloaded faculty member may find it necessary and/or prudent to seek out a different Major Professor.
5. The Major Professor is the primary person who advises the student in selecting the course of study and in selecting and conducting the thesis research. The Major Professor also a) requests the scheduling of the Advancement to Candidacy meeting; b) requests the scheduling of the Thesis Seminar; c) supervises the writing of the Thesis; and d) performs other duties as described by Department of Biological Sciences and Office of Graduate Studies policies.

6. The Major Professor usually works closely with his/her graduate student, instructing them in the techniques inherent to each area of research and research literature. Each student should maintain close communication with his/her Major Professor during his/her entire graduate program through individual consultations and/or group meetings with other members of the professor's research group.
7. See Appendix A for a list of faculty in Biological Sciences who have expressed a willingness to serve as Major Professors and a list of their research interests

## **B. Temporary Academic Advisor**

1. Students admitted into the graduate program without a Major Professor (see section II.B.6) will be assigned a temporary academic advisor upon acceptance into the Department of Biological Sciences graduate program. The temporary advisor must be a full-time, tenured or tenure-track faculty member of the Department of Biological Sciences.
2. Prior to enrolling, or during the first semester of enrollment, the student should meet with his/her temporary academic advisor to tentatively plan the student's course of study (courses used to meet the unit requirements for the degree). The student should continue to meet with his/her temporary advisor for advising until the student has selected, and been accepted by, a Major Professor.
3. As soon as a student decides upon an area of research interest, he/she should seek acceptance by a Major Professor who has expressed willingness to serve as a Major Professor in this area (see Appendix A). The student may do this prior to enrolling and may go directly to his/her Major Professor for initial and subsequent advising. The student may change his/her area of research interest and Major Professor as he/she wishes until he/she has been Advanced to Candidacy.

## **C. Supervisory Committee**

1. The student's Supervisory Committee consists of the student's Major Professor and two other tenured or tenure-track faculty, except as noted under paragraph 4 below. The student's Major Professor will chair the Supervisory Committee.
2. At least two members of the Supervisory Committee must be faculty in the Department of Biological Sciences.
3. Prior to Advancement to Candidacy, the student and his/her Major Professor should jointly select two more members to serve on the student's Supervisory Committee.
4. The third member may be an individual who holds an earned doctorate in Biological Sciences or a related field and who is not a tenured or tenure-track faculty member in the Department of Biological Sciences at CSU Sacramento. Part-time and adjunct faculty members may serve in this capacity, as well as faculty from other academic departments and research scientists at government agencies and private institutions.
5. Faculty members on F.E.R.P. (participating in the Faculty Early Retirement Program) may serve as members of Supervisory Committees, but they may not serve as Major Professor.
6. The Supervisory Committee aids the Major Professor in directing the graduate work of the student. More specifically, the Supervisory Committee reviews and offers suggestions on the course of study and thesis research as designed by the student and his/her Major Professor. The Supervisory Committee evaluates and approves the student's Advancement to Candidacy, thesis seminar and thesis, and performs other

duties as described by the Department of Biological Sciences and the Office of Graduate Studies

## VI. Advancement to Candidacy for the Master's Degree

The Advancement to Candidacy process serves to ensure that a student is qualified and making good progress toward successfully completing the Master's thesis. It also provides the student's Supervisory Committee and the Graduate Committee an opportunity to provide timely feedback to the student regarding the scientific merit and scope of the proposed research. Hence, it is important that Advancement to Candidacy for the Master's degree occurs early in a student's graduate program. Advancement to Candidacy should take place following preliminary experiments which show that the approach and proposed methods are feasible – NOT after all of the data has been collected. In addition, simply collecting a large amount of data is no guarantee of successful advancement to candidacy.

There is no assurance that any courses other than *graduate program core courses* in Biological Sciences, or any other research, may be used to meet degree requirements until the student has advanced to candidacy.

### A. Purpose of Advancement

1. Advancement to Candidacy gives the student official recognition as a candidate for the Master's degree.
2. Advancement to Candidacy gives official approval of the student's course of study and proposed thesis research.
3. Approval of the course of study and the thesis research proposal, as described in the approved abstract, constitutes a contract between the student and the Department of Biological Sciences.
4. Advancement to Candidacy verifies to the Office of Graduate Studies that the student is receiving proper advising and supervision, and that graduate policies and standards are being met by the student and the Department of Biological Sciences.

### B. Eligibility for Advancement

1. Students who were given Conditionally Classified status must make up their deficiencies prior to being Advanced to Candidacy.
2. To Advance, a student must have already completed at least 12 units in the Biology graduate program. At least one course of those 12 units must have been a 200-level course in the graduate program. The student must already have worked with her/his Major Professor and developed an acceptable thesis proposal and abstract.
3. A student must satisfy the writing proficiency requirement prior to being Advanced to Candidacy.

### C. Deadlines for Advancement

1. Requests for scheduling the Advancement to Candidacy meeting may be submitted to the Graduate Secretary any time during the semester up to four weeks prior to the beginning of final examinations week.

2. The Advancement to Candidacy meeting must occur prior to the beginning of final examinations week.
3. At least one week prior to the Advancement to Candidacy meeting, the student must submit to the Graduate Secretary a) an *Application for Advancement to Candidacy* form that has been properly filled out; b) a description of the proposed thesis research; and c) an *Abstract of the Thesis Research Proposal* form. (See part G of this section for descriptions of these documents.)
4. Failure to meet these deadlines will result in a delay of advancement until the following semester. Advancement meetings are not held during the summer or during the interval between the fall and spring semesters.
5. It is the responsibility of the Graduate Coordinator to duplicate and distribute multiple copies of the *Application for Advancement to Candidacy* form, the description of the proposed thesis research, and the *Abstract of the Proposed Thesis Research* to the Graduate and Supervisory Committees.

#### **D. Planning the Course of Study and Thesis Research**

1. The course of study (courses used to meet unit requirements for the degree) and the thesis research proposal are initially planned by the student in consultation with his/her Major Professor.
2. Once the student and the Major Professor have agreed upon a course of study and a thesis research proposal, the course of study and a written description of the proposed thesis research must be submitted to the other two members of the Supervisory Committee for their review, possible modification, and tentative approval. (Final approval can only be given at the Advancement to Candidacy meeting).
3. A student who plans to use animal or human subjects in his/her thesis research or in investigating a potential research project must observe all CSUS policies and procedures regarding the use of animal and human subjects in research. This will likely require filing an acceptable Animal Care and Use Protocol prior to working with animals or human subjects. Information on the use of animal and human subjects is available from the Department of Biological Sciences office.

#### **E. Nature of the Thesis Research**

The thesis research must be based on either (a) data generated by the student's original research in which the student performs the field work or laboratory experiments or (b) data obtained from sources other than the student's own field work or laboratory experiments, provided the data is analyzed and presented in an original manner. The use of data must result in an original contribution to the problem being investigated.

#### **F. Scheduling the Advancement to Candidacy Meeting**

1. Once a student and his/her Supervisory Committee have tentatively agreed upon the course of study and the proposed thesis research, the Major Professor requests the Graduate Coordinator to schedule an Advancement to Candidacy meeting. A *Request for Scheduling the Advancement to Candidacy Meeting* form for this purpose may be obtained from the Department office (SQU 202).
2. It is the responsibility of the Graduate Coordinator to schedule the Advancement to Candidacy meeting.

3. The Advancement meeting must be scheduled at a time that is acceptable to the student, the members of the Graduate Committee, and the members of the student's Supervisory Committee.
4. When requesting the Advancement meeting, the student's Major Professor must submit to the Graduate Coordinator the names of the other members of the student's Supervisory Committee and a list of times when the student is available for the meeting.
5. It is the responsibility of the Graduate Coordinator to inform the student, the members of the Graduate Committee, and the members of the Supervisory Committee of the time and location of the Advancement meeting.
6. All Advancement meetings must be held on the CSUS campus.

## G. Documents to be Presented at the Advancement to Candidacy Meeting

1. Completed *Application for Advancement to Candidacy* form for the Master's Degree.

Prior to the Advancement meeting, the student should obtain an *Application for Advancement to Candidacy* form from the Department of Biological Sciences office (SQU 202), or on the Department of Biological Sciences website at <http://www.csus.edu/bios/GradStudents.html>.

2. Thesis Research Proposal

Prior to the Advancement meeting, the student must prepare a written description of the proposed thesis research (Thesis Research Proposal). The Thesis Research Proposal must emphasize and have as its focus, a clear statement of the subject being investigated and the manner in which the topic will be researched. The thesis proposal must contain at least three sections: *Introduction*, *Hypotheses and Objectives*, and *Materials and Methods*. The *Introduction* is usually organized in such a manner that it leads up to a statement of the subject so that the proposed research appears to be the next logical step. The *Hypotheses and Objectives* section should state once again the subject being investigated and must identify the specific hypotheses being tested (if appropriate) and the research objectives that will be examined. The objectives are usually presented as a list of simple declarative sentences. If the research has an experimental design, the *Materials and Methods* section must contain a description of sample sizes, number of replicates, and controls. If appropriate, the *Materials and Methods* section must contain a description of how the data will be analyzed (i.e., presentation of relevant statistical tests).

The *Introduction* must:

- a) provide background information so that committee members who may be unfamiliar with the area of research can understand the nature of the topic being investigated;
- b) review the pertinent literature;
- c) state the subject being investigated;
- d) describe briefly the preliminary research that the student has done; and

- e) state the originality and rationale of the proposed research. In addition, the student should comment on what he/she thinks the research will contribute to current scientific knowledge of the subject and its broader significance.

The *Hypotheses and Objectives* section must:

- a) state the hypothesis(es) (if appropriate) of the proposed research;
- b) identify the major objectives of the proposed research;

The *Materials and Methods* section must:

- c) identify the location of the research;
- d) state the time frame of the research;
- e) describe the basic design of the research; and
- f) describe the major materials, techniques, and analytical approaches that will be used in the research.

The student will note that this is similar in format to the first two parts of a thesis. However, a Thesis Research Proposal is not ordinarily written in the detail that is required in a thesis. Therefore, it is suggested that thesis research proposals be no more than 10 double-spaced text pages in length.

### 3. Completed *Abstract of the Thesis Research* form

Prior to the Advancement to Candidacy meeting, the student must obtain an *Abstract of the Proposed Thesis Research* form from the Department of Biological Sciences office (SQU 202) or through the department's graduate program website: <http://www.csus.edu/bios/GradStudents.html>.

The abstract constitutes a formal agreement between the student and the Department of Biological Sciences. When the thesis seminar is presented, the abstract is used by the Graduate Program and Supervisory Committees as one measure of the candidate's successful completion of the thesis seminar. (See section X, part E for additional information on the evaluation of the thesis seminar). The *Abstract of the Proposed Thesis Research* should be no more than 1-1/2 to 2 single-spaced pages in length.

The *Abstract of the Proposed Thesis Research* should contain the following information:

- a) A brief statement of the subject being investigated;
- b) A list of the specific hypotheses and research objectives;
- c) The location of the research (if appropriate)
- d) A description of the nature of the data that will be obtained from the research;
- e) A description of the basic approach and design of the research;
- f) A statement of how the data will be analyzed; and
- g) The time-frame of the research.

Descriptions of techniques should not be included in the abstract.

#### 4. Distribution of Documents

It is the responsibility of the Graduate Coordinator to duplicate and distribute copies of the *Application for Advancement to Candidacy* form and the *Abstract of the Proposed Thesis Research* to both the Graduate and Supervisory Committees. It is the student's responsibility to distribute the Thesis Research Proposal to the Graduate Coordinator and the student's Supervisory Committee.

### H. The Advancement to Candidacy Meeting

1. The Advancement to Candidacy meeting is attended by the student, his/her Supervisory Committee, and at least one member of the Graduate Committee.
2. The Advancement meeting is conducted by the Graduate Coordinator.
3. The Advancement meetings are closed meetings. However, the student may elect to open the oral presentation of his/her proposed thesis research to the public.
4. During the first part of the Advancement meeting, the student's course of study is reviewed, modified if necessary, and tentatively approved by the student's Supervisory Committee.
5. During the second part of the Advancement meeting, the student presents his/her thesis research proposal. The proposal should be presented in the manner in which it is written (see part G, paragraph 2 of this section). The student's presentation should take approximately 20 minutes.
6. Once the thesis research proposal has been presented, non-committee members will be asked to leave the room. They may not ask the student any questions or participate in any discussion.
7. The student and the committee members will discuss the proposed thesis research. Once the discussion has concluded, the student will be asked to leave the room.
8. The members of the Graduate and Supervisory Committees will then resolve, if possible, any differences of opinion that they may have on the student's course of study and the proposed thesis research. The committees will decide whether to approve or disapprove the student's Advancement to Candidacy (see Section VI.I. for approval policy).
9. The student will be asked to return to the meeting. The student will be informed of the decision to approve or disapprove his/her Advancement to Candidacy request.
10. A student whose Advancement to Candidacy request has been approved may be asked to make minor changes in the course of study or thesis research proposal before his/her application is submitted to the Office of Graduate Studies. The student must be informed of such changes before the Advancement to Candidacy meeting is adjourned.
11. If a student is not Advanced to Candidacy, he/she must be informed before the Advancement to Candidacy meeting is adjourned, what must be done if his/her deficiencies block Advancement to Candidacy. The members of the Graduate and Supervisory Committees who voted against the student's Advancement to Candidacy are responsible for informing the student of his/her deficiencies and what he/she must do to advance to candidacy.

## I. Approval of Advancement to Candidacy

1. Advancement to Candidacy requires the approval of all three members of the student's Supervisory Committee. In addition, Advancement to Candidacy requires the approval of two members of the Graduate Committee if three attended the Advancement to Candidacy meeting, or one member of the Graduate Committee must approve if two members attended the Advancement to Candidacy meeting.
2. The student's Advancement to Candidacy application must be approved by the Director of the Office of Graduate Studies before the student is officially Advanced to Candidacy.

## J. Filing the Advancement to Candidacy Documents

1. The *Application for Advancement to Candidacy* form must be signed by the student, the student's Major Professor, and the Graduate Coordinator. The Graduate Coordinator will forward the form to the Director of the Office of Graduate Studies for their approval or disapproval.
2. Following the Advancement to Candidacy meeting, the student's thesis research proposal and the *Abstract of the Proposed Thesis Research* form will be placed in the student's file in the Department office.
3. If the student has been asked to make changes in the Advancement to Candidacy documents, he/she must submit the revised documents to the Graduate Coordinator.
4. The Graduate Coordinator will place the *Approval of Advancement to Candidacy* form in the student's file following the Advancement to Candidacy meeting. The form bears the signatures of all members of the Supervisory and Graduate Committees.

## K. Changes in the Student's Graduate Program

1. A change of Major Professor or a significant change in the course of study or the thesis research requires a hearing by the Supervisory and Graduate Committees.
2. Minor changes in the course of study, such as substituting one course for another, requires approval by all three members of the Supervisory Committee, at least two of the three members of the Graduate Committee, and from the Director of the Office of Graduate Studies. The Office of Graduate Studies *Petition for Exception* is used for such requests.
3. Minor changes in the thesis research may occur. Minor changes do not require formal approval by anyone, however, it is advised that the student discuss minor changes and obtain informal approval from their Major Professor.

## VII. Retention in the Graduate Program

### A. Change in Graduate Status from “Conditionally Classified” to “Classified”.

1. A student who receives Conditionally Classified status must make up deficiencies identified at the time of admission within two semesters of entering (enrolling in courses) the Biological Sciences program or they will be removed (declassified) from the Department's graduate program.

2. Upon making up deficiencies, the student must complete an *Application for Classification* form, which is available through the Office of Graduate Studies website: <http://www.csus.edu/gradstudies/Forms.htm> and the Department of Biological Sciences website: <http://www.csus.edu/bios/GradStudents.html>.
3. The student must submit documentation (e.g., transcripts, letter from faculty member, etc.) with the *Application for Classification* form demonstrating that the deficiencies have been removed. For coursework deficiencies made up at CSUS, no transcripts must be submitted. However, for coursework deficiencies that are not made up at CSUS, the student must provide the Graduate Coordinator with official transcripts.
4. The Graduate Coordinator is responsible for notifying the Office of Graduate Studies (by submitting to Graduate Studies the *Application for Classification* form) that the student has made up his/her academic deficiencies and for requesting that the student receive Graduate Classified status.

## **B. Registration Requirements**

1. A student who does not enroll for one semester is granted an automatic leave of absence with no penalty. The student does not need to file any form or petition to receive this leave of absence. The student maintains his/her classification status, their catalog rights, and is exempt from re-application fees.
2. Classified graduate students who do not maintain continuous enrollment (an absence for two or more semesters) must apply for readmission following the same procedure and meeting the same deadlines as new applicants (see Section I.A)
3. A student who has completed all of his/her coursework and has received an "SP" in BIO 500 must maintain continuous enrollment in the program. Continuous enrollment can be maintained by enrolling in unit-earning courses (regular courses) or by enrolling in Continuous Enrollment (BIO 599) through the Office of Graduate Studies, which does not earn course units. As long as the student is within the seven-year time limit, Continuous Enrollment may be taken at a reduced tuition rate for up to 3 semesters after the initial BIO 500; after this time, the student must begin the continuous enrollment cycle again and re-enroll in BIO 500 at the regular tuition rate.

A student who does not finish their thesis within four semesters of enrolling in the thesis units (BIO 500) will receive a grade of "NC" for these units and will be required to re-enroll for the thesis units.

## **C. Maintenance of Grade Point Average**

A graduate student must maintain a GPA of at least 3.0 in his/her courses, excluding lower division courses. Failure to maintain a GPA of at least 3.0 for two consecutive semesters will result in removal (disqualification) from graduate study at CSUS.

## **D. Time Limit for Advancement to Candidacy**

A student should be Advanced to Candidacy for the Master's degree within four semesters of entering the Department of Biological Sciences' graduate program.

## **E. Time Limit for the Biological Sciences Master's Degree**

Master's degree requirements must be completed within seven years starting from the time the first course is used to meet the Master's degree requirements. No extensions of the seven-year time limit will be granted; students who fail to complete all degree requirements within a seven-year period will have their graduate programs automatically terminated. Students who have had their graduate programs terminated because they have reached the seven-year limit will not be readmitted to the graduate program of the Department of Biological Sciences.

## **F. Address on File in the Department of Biological Sciences Office**

A student should inform the Department of Biological Sciences of any change in address so that the Department can inform the students of meetings, deadlines, etc., that are relevant to the student's graduate program.

## **G. Leaves of Absence**

A leave of absence is granted for military, medical, and certain educational reasons. The student must apply for a leave of absence using a *Leave of Absence Request* form, which is obtained from the Admissions and Records website or the service counter in Lassen Hall. The student should be aware that a leave of absence does not change the seven-year time limit for completion of the Master's degree.

# **VIII. Exceptions to Policies and Procedures**

## **A. The Office of Graduate Studies Exceptions to Policies and Procedures**

1. The Office of Graduate Studies Exceptions to the Policies and Procedures must be approved by the Director of the Office of Graduate Studies.
2. To request an Office of Graduate Studies Exception to Policies and Procedures, a student must obtain a *Petition for Exception* form from the Office of Graduate Studies website or office. After completing the form, the student must obtain the signatures of his/her Major Professor and the Graduate Coordinator indicating their approval or denial. The student is responsible for returning the form to the Office of Graduate Studies for the Director's approval or denial.
3. The Office of Graduate Studies will inform the student and the Department of Biological Sciences of the Director's decision.

## **B. The Department of Biological Sciences Exceptions to Policies and Procedures**

1. The Graduate Committee has been authorized by the Department of Biological Sciences to grant exceptions to departmental graduate policies and procedures. The form is available online or at the counter of the Office of Graduate Studies. The student should also have the members of his/her Supervisory Committee sign the request to indicate their approval. It is highly unlikely that the Graduate Committee will grant an exception without the knowledge and approval of the student's Supervisory Committee.
2. A Request for Exception must state why the student is unable or does not wish to follow the regular policy or procedure.

3. A Request for Exception must be in written form, preferably typed, and must be signed by the student.
4. A Request for Exception is presented by the student to the Graduate Coordinator. The Graduate Coordinator is responsible for taking the request to the Graduate Committee and for notifying the student of their decision.
5. Departmental policies and requirements that are initiated after a student has been Advanced to Candidacy do not apply to that student.

### **C. Appeal of Graduate Committee's Decisions and Actions**

The Department of Biological Sciences Executive Committee is responsible for hearing appeals of the Graduate Committee's decisions. The student should ask the Department of Biological Sciences Chair about appeal procedures.

## **IX. Thesis**

### **A. Nature of the Thesis**

1. The Office of Graduate Studies describes the thesis in the following manner: "A thesis is the written product of the systematic study of a significant subject. It clearly identifies the subject, states the major assumptions, explains the significance of the undertaking, sets forth the sources for and methods of gathering information, analyzes the data, and offers a conclusion or recommendation. The finished product must evidence originality, critical and independent thinking, appropriate organization and format, clarity of purpose, and accurate and thorough documentation."
2. The thesis must be based on research that was approved when the student was Advanced to Candidacy for the Master's degree. The nature of the thesis research is described in Section VI, part E.
3. The thesis must have the organization and format described in the CSUS Guide for Thesis/Project Format. Copies of this guide are available in the Hornet Bookstore.
4. For organization and format guidelines not provided by the CSUS Guide for Thesis/Project Format, use the most recent edition of *Form and Style: Research Papers, Reports, Theses* by Carole Slade. Copies of this manual are available in the Hornet Bookstore and the CSUS Library.

### **B. Deadlines for Submitting the Thesis**

1. Preliminary drafts of the thesis should be reviewed by the Major Professor and revised by the student before an acceptable first draft of the thesis is distributed to the other members of the student's Supervisory Committee.
2. An acceptable draft of the thesis must be presented to each member of the Supervisory Committee with sufficient time to permit the members to read and criticize the thesis and allow the student to incorporate suggested changes into the final draft. Sufficient time is understood to be at least four weeks prior to the deadline for submitting the thesis to the Office of Graduate Studies.

3. The final copy of the thesis must be presented to the members of the Supervisory Committee for their approval no later than two weeks prior to the deadline for submitting the thesis to the Office of Graduate Studies.
4. Since the deadline for filing the final copy of the thesis has varied during the last several semesters, the student should obtain the exact date from the Class Schedule early in the semester in which he/she plans to graduate.

### **C. Approval of the Thesis**

1. The thesis must be approved by all three members of the Supervisory Committee (Readers).
2. The Chair of the Department of Biological Sciences may sign for an absent member of the Supervisory Committee if they have been designated as a proxy by the absent member.
3. The Graduate Coordinator examines the thesis for proper organization and format after the thesis has been approved by the Supervisory Committee. The organization and format of the final copy of the thesis must be approved and signed by the Graduate Coordinator. *Note:* The Chair of the Department of Biological Sciences may approve and sign the thesis if the Graduate Coordinator is not available to serve in this role.
4. Once the thesis has been approved by the Graduate Coordinator, the student submits their thesis to the Office of Graduate Studies for final approval and filing.

### **D. Submission of the Final Copy of the Thesis**

1. The Office of Graduate Studies requires one copy of the thesis plus copies of specific pages (see section XI, part G).
2. The Department of Biological Sciences requires one bound copy of the final, approved thesis. An inexpensive binding such as Velo Binding is adequate, though a more durable binding is encouraged. The front cover should bear a label on which the title, author, and date are typed. This copy should be submitted to the Graduate Coordinator as soon as possible after acceptance of the thesis by Office of Graduate Studies and prior to graduation.
3. The Graduate Coordinator is responsible for depositing the thesis in the Department of Biological Sciences thesis library.

## **X. Thesis Seminar**

### **A. Eligibility for Scheduling the Thesis Seminar**

The thesis seminar may be given prior to turning in the thesis. However, the thesis seminar may not be given until a first draft of the thesis has been completed and approved by the student's Supervisory Committee. This means that the thesis research must be finished and all sections of the thesis must be in written form. It is the responsibility of the student's Major Professor to verify that a first draft of the thesis has been satisfactorily completed. Depending on the quality of the thesis at the time of the thesis seminar, additional changes to the thesis may be requested by the student's Supervisory Committee at the thesis seminar.

## B. Deadlines for the Thesis Seminar

1. A request to schedule the thesis seminar may be made any time during the semester up to four weeks prior to the beginning of final examinations week, and must be presented no later than one week prior to the Office of Graduate Studies deadline for submission of the thesis/project.
2. The thesis seminar may not be given during the summer or during the interval between the fall and spring semesters. A student who plans to complete their thesis during the summer must present the thesis seminar during the preceding semester.

## C. Scheduling the Thesis Seminar

1. Once a student is ready to present his/her thesis seminar, the student's Major Professor requests the Graduate Coordinator to schedule the seminar. The request is submitted to the Graduate Secretary using the *Request for Scheduling the Thesis Seminar* form, which is obtained from the Department of Biological Sciences website or in the Department of Biological Sciences office (SQU 202).
2. It is the responsibility of the Graduate Coordinator to schedule for the thesis seminar.
3. The thesis seminar must be scheduled at a time that is acceptable to the student and the members of the Supervisory and Graduate Committees. The thesis seminar must be given on the CSUS campus.
4. Before the student's Major Professor can schedule the thesis seminar, the Major Professor must submit the names of the members of the Supervisory Committee and a list of possible seminar presentation times to the Graduate Coordinator.
5. It is the responsibility of the Graduate Coordinator to inform the student and the members of the Supervisory and Graduate Committees, of the time and location of the thesis seminar.

## D. Presenting the Thesis Seminar

1. The thesis seminar must be attended by;
  - a. The Major Professor;
  - b. At least one other member of the Supervisory Committee, and
  - c. At least two members of the Graduate Committee.
2. The Chair of the Department of Biological Sciences may serve in place of one absent member of the Supervisory Committee or Graduate Committee.
3. The thesis seminar is open to the public and may be attended by anyone who wishes to attend.
4. During the first part of the thesis seminar, the student orally presents the content of his/her thesis. This usually takes 30 to 40 minutes.
5. The thesis seminar must be based on the thesis and must be representative of the general nature of the thesis. However, the student is not expected, nor should he/she attempt, to present all the detail normally found in a thesis. Detailed descriptions of

techniques should be avoided. Minor portions of the thesis may be omitted from the presentation for the sake of clarity and brevity.

6. It is strongly recommended that the student rehearse the thesis seminar with his/her Major Professor. It is highly unlikely that the other members of the Supervisory Committee and members of the Graduate Committee will find the thesis seminar acceptable if the Major Professor does not.
7. Once the student has orally presented the thesis, the student is expected to answer questions on the thesis. This portion of the thesis seminar usually lasts 10 to 15 minutes. Anyone in the audience may ask questions. *Note:* members of the Graduate Committee and the student's Supervisory Committee may not prompt the student or correct the student's responses to questions asked during the Q & A session.
8. Following the question and answer period, the Supervisory and Graduate Committees will leave the room. The committees will then grade the student's thesis seminar as "acceptable" or "unacceptable" (see Section X.E. for approval policy). Upon return of the Committees, the student will be informed of the Committees' decision.
9. If a student's thesis seminar is deemed unacceptable, he/she will be informed before the thesis seminar meeting is adjourned. The members of the Graduate and Supervisory Committees who deemed the student's thesis seminar as unacceptable are responsible for informing the student of his/her deficiencies and what he/she must do to present an acceptable thesis seminar (see Section X.E. for approval policy).
10. Before the thesis seminar meeting is adjourned, the student may be asked by their Supervisory Committee to make changes to the written thesis. Any changes requested by the student's Supervisory Committee must be made before the written thesis is approved (see Section IX.C. for approval policy)

## E. Evaluation and Approval of the Thesis Seminar

1. The thesis seminar is evaluated on the basis of:
  - a) The successful completion of the thesis objectives as stated in the *Abstract of the Proposed Thesis Research*;
  - b) Presentation;
  - c) Organization;
  - d) Explanation of data; and
  - e) Articulation of the significance and relationship of the thesis to the pertinent literature in the field.
2. The thesis seminar is graded as "acceptable" or "unacceptable." The Graduate Coordinator provides an *Approval of the Thesis Seminar* form to provide a record of this action.
3. The thesis seminar must be graded as "acceptable" by at least two members of the Supervisory Committee and by at least two members of the Graduate Committee in order for the student to pass the thesis seminar requirement.

4. If a student does not pass the thesis seminar requirement the first time, a second presentation is permitted. The procedure for scheduling the second thesis seminar is the same as for the first.
5. If the second thesis seminar is not accepted, the student will be permanently removed (disqualified) from the Department of Biological Sciences' graduate program.
6. The *Approval of the Thesis Seminar* form, which bears the signatures of all members of the Supervisory and Graduate Committees who had attended the seminar along with their approval or disapproval notation regarding the student's thesis seminar, is placed in the student's file by the Graduate Coordinator.

## XI. Graduation Procedures

- A. Enroll in BIO 500 in the semester in which they anticipate graduating. If the student does not complete their degree requirements in the semester in which they enroll in BIO 500, they must maintain continuous enrollment until completion of their degree requirements as described in section VII.B.2.
- B. Complete an *Application for Graduation with a Master's Degree* form early in the semester in which you plan to complete degree requirements. This form can be obtained from the Office of Graduate Studies or online at [http://www.csus.edu/gradstudies/appinfo\\_guidelines.htm](http://www.csus.edu/gradstudies/appinfo_guidelines.htm)
- C. Pay the graduation/diploma fee in the Student Financial Services Center (Lassen Hall). A receipt number will be stamped on your *Application for Graduation with a Master's Degree* form.
- D. File a completed *Application for Graduation with a Master's Degree* form in the Office of Graduate Studies prior to the appropriate deadline.
- E. Inquire at the Associated Students Office (located in the CSUS Union) about the dates and fees designated for graduating students to be measured for caps, gowns, and hoods.
- F. In summary, file the following items prior to the appropriate Thesis/Project deadline:
  1. One approved copy of the Thesis on 8½ x 11" 24 lb 100 % cotton white paper, including a single blank sheet for both the front and back of the Thesis;
  2. One additional signed copy of each of the following Thesis signature pages on regular or cotton paper: Format Approval page, Thesis Approval page, and Abstract;
  3. Three copies of *Thesis/Project Receipt* form (available in the Office of Graduate Studies or online at [http://www.csus.edu/gradstudies/appinfo\\_guidelines.htm](http://www.csus.edu/gradstudies/appinfo_guidelines.htm))
  4. One paid *Microfilming and Binding Receipt* (available in the Office of Graduate Studies or online at: [http://www.csus.edu/gradstudies/appinfo\\_guidelines.htm](http://www.csus.edu/gradstudies/appinfo_guidelines.htm))
  5. File one inexpensively bound copy of the thesis (regular paper ok) with the Graduate Coordinator for deposition in the Department of Biological Sciences thesis library;
  6. In accordance with academic etiquette and tradition, the student should give a nicely bound final copy of the thesis to his/her Major Professor; and
  7. Students are encouraged to attend and participate in Commencement.

## **XII. Appendix A - Faculty Research Interests**

The following faculty in Biological Sciences has expressed willingness to serve as Major Professors, specializing in the areas listed beside their names.

<b>William E. Avery</b>	Ecology, Invertebrate Zoology, and Marine Biology
<b>Ruth E. Ballard</b>	Human Molecular Genetics and Forensics
<b>James W. Baxter</b>	Biodiversity-functioning, Plant-mycorrhizal Interactions, Community Ecology, Science Education
<b>Rosalee C. Carter</b>	Human Anatomy, Electron Microscopy, Neuroscience
<b>Ronald M. Coleman</b>	Evolutionary Ecology, Behavior, Fishes, Frogs, Tropical Biology
<b>Shannon Datwyler</b>	Reproductive Biology of Plants
<b>Nick Ewing</b>	Plant Molecular Biology and Plant Physiology
<b>Enid Gonzalez</b>	Microbial Genetics, Molecular Plant-bacterial Interactions
<b>Brett Holland</b>	Evolutionary genetics, Social Evolution, Sexual Selection
<b>Christine Kirvan</b>	Infectious disease, Autoimmunity, and Molecular mimicry
<b>Jamie Kneitel</b>	Community Ecology, Food Webs, Metacommunities, Conservation Biology
<b>Winston Lancaster</b>	Human Anatomy, Biosonar in Bats, Functional Morphology
<b>Tom Landerholm</b>	Cell and Developmental Biology
<b>Susanne Lindgren</b>	Pathogenic Bacteriology
<b>Jennifer Lundmark</b>	Cardiovascular Physiology
<b>Hao Nguyen</b>	Cell and Molecular Biology; Colon Carcinogenesis
<b>Tom Peavy</b>	Molecular Genetics
<b>Adam Rechs</b>	Neurophysiology, Digestive Physiology
<b>Ben Sacks</b>	Evolution, ecology and conservation of terrestrial vertebrates
<b>Chris Sullivan</b>	Physiology/Anatomy, Vascular Biology, Angiogenesis