July 3, 2008

TO: ILYA DUMER, CHAIR
GRADUATE COUNCIL

FM: THOMAS COGSWELL, CHAIR
RIVERSIDE DIVISION

RE: PROPOSED TRANSFER OF THE INTERDEPARTMENTAL GRADUATE PROGRAM IN ENVIRONMENTAL SCIENCES TO THE DEPT OF ENVIRONMENTAL SCIENCES

The above proposal has been reviewed by the committee on Educational Policy, Planning and Budget and Library as well as the Executive Council and was approved on behalf of the division by the Executive Council on July 3, 2008. The proposal will be added to the November 2008 Division agenda under the Consent Calendar.

Attached is the entire proposal including the comments from the reviewers.
June 6, 2008

TO: CHRISTOPHER CHASE-DUNN, CHAIR
ACADEMIC PERSONNEL

ANTHONY NORMAN, CHAIR
PLANNING AND BUDGET

PIERRE KELLER, CHAIR
EDUCATIONAL POLICY

DAVID CROHN, CHAIR
LIBRARY

FM: THOMAS COGSWELL, CHAIR
RIVERSIDE DIVISION

Re: Transfer of the Interdepartmental Graduate Program in Environmental Sciences

The attached is being sent to you for your review. Also attached is the Academic Senate policy on the procedures for transfer, consolidation, disestablishment or discontinuance of an academic program.

Please send your response to me by July 1, 2008.

Attached
To: Thomas Cogswell  
Chair, Riverside Division Academic Senate

Fr: Chris Chase-Dunn  
Chair, Committee on Academic Personnel

Re: Transfer of the Interdepartmental Graduate Program in Environmental Sciences

CAP has reviewed this proposal and supports the plan (+9-0-0).
June 24, 2008

TO: Thomas Cogswell, Chair
   Riverside Division

FM: Tony Norman, Chair
   Planning & Budget

RE: PROPOSED TRANSFER OF THE INTERDEPARTMENTAL GRADUATE PROGRAM IN ENVIRONMENTAL SCIENCES TO THE DEPT OF ENVIRONMENTAL SCIENCES

The Planning & Budget Committee met on June 18, 2008 to consider the proposed transfer of the Interdepartmental Graduate Program in Environmental Sciences to the Department of Environmental Sciences. P&B received 10 documents relating to the request; see list at bottom.

P&B notes that consideration of this topic has extended over three years. However to our knowledge, this is the first time that P&B has been included in the review process. This seems surprising, since in Document #10, it is clearly stated in items #2 and #3 that P&B is to be one of the reviewing committees.

Normally when P&B is evaluating proposals relating to colleges, departments, or other organizational units, it is customary, if not mandatory, that budgetary, FTE and organizational information be provided. In the present proposal concerning the change of status of the Environmental Sciences from being an ‘interdepartmental’ graduate program, to being a ‘departmentally’ based program, no budgetary or explicit FTE information was provided. P&B understands that at UCR interdepartmental programs in CNAS have quite modest budgets (e.g. approximately $20,000) and that it seems likely that departmentally based program will, in fact, be in a more secure financial position.

In spite of these shortcomings, P&B does support (6 in favor; 0 opposed; 0 abstentions – 2 members were absent) the realignment of the interdepartmental Environmental Graduate Program so that is will be housed in the Department of Environmental Sciences as a departmental graduate program. At the same time a track in Soil & Water Sciences will be created within the Environmental Sciences Departmental graduate program. The great majority of the affected faculty (both Environmental Sciences Departmental based faculty and Participating faculty from other departments) have been properly consulted and are supportive of the change. The faculty from outside the Environmental Sciences
Department will become participating faculty under the rubric of being Cooperative Faculty.

Documents provided P&B (starting with the most recent)

1. Letter of March 7th, 2008 from I. Dumer, Chair UCR Graduate Council to Bruce Schumm, Chair CCGA.

2. Letter of October 19th, 2007 from Bruce Schumm, Chair CCGA to W. A. Ashomore, Chair UCR Graduate Council.


5. Email of May 9th, 2007 from M. Yates to R. R. Russell transmitting a”[proposal of transfer of the Interdepartmental Environmental Sciences Graduate Program…”

6. Document of May 9th, 2007 describing Proposed Curricular Changes to the Graduate Program in Environmental Sciences”.

7. Letter of May 9th, 2007 from M. V. Yates, Chair of Environmental Sciences, to R. R. Russell, Chair UCR Graduate Council containing “responses to Reviews of the Environmental Sciences Graduate Program and the Soil & Water Sciences Graduate Program.

8. Letter of June 10th, 2005 from D. A. Wong, Chair UCR Graduate Council to W. Farmer, Chair, Department of Environmental Sciences concerning Reviews of Environmental Sciences and Soil & Water Sciences Graduate Programs.

9. Guidelines for Developing bylaws for Interdepartmental Graduate Program.

10. Procedures for transfer, consolidation, disestablishment, or discontinuance of an academic program, or unit. (UCR local policy).
June 16, 2008

TO: THOMAS COGSWELL, CHAIR
RIVERSIDE DIVISION

FR: PIERRE KELLER, CHAIR
COMMITTEE ON EDUCATIONAL POLICY

RE: PROPOSAL TRANSFER AND CONSOLIDATION OF ENVIRONMENTAL SCIENCES GRADUATE PROGRAM

At its meeting on June 11, the CEP discussed the proposal to (1) change the status of the interdepartmental program in Environmental Sciences, whereby housing it in the Department of Environmental Sciences as a departmental program and (2) to move the Soil and Water Sciences program as a track under the Environmental Sciences program. By unanimous decision (9 yes votes, 0 no votes), we agreed that this makes good educational policy.
July 2, 2008

TO: THOMAS COGSWELL, CHAIR
RIVERSIDE DIVISION

FR: DAVID CROHN, CHAIR
COMMITTEE ON LIBRARY AND SCHOLARLY COMMUNICATION

RE: TRANSFER OF THE INTERDEPARTMENTAL GRADUATE PROGRAM
IN ENVIRONMENTAL SCIENCES

The Committee on Library and Scholarly Communication had no comment about the transfer of the interdepartmental graduate program in Environmental Sciences.
March 7, 2008

BRUCE SCHUMM
CHAIR, CCGA

Re: UC Riverside Environmental Sciences and Soil & Water Sciences graduate programs

Dear Dr. Schumm:

As new Chair of Graduate Council, I write in response to your October 19 memo regarding the changes that UCR’s Graduate Council approved for the Environmental Sciences and the Soil & Water Sciences graduate programs in September 2007. In brief, the Graduate Council approved the following proposals:

• To change the status of the Interdepartmental graduate program in Environmental Sciences and house it in the Department of Environmental Sciences as a departmental graduate program
• To create a track for Soil & Water Sciences within the Environmental Sciences departmental graduate program
• To place a moratorium on admissions to the current Soil & Water Sciences graduate program
• To delay the formal disestablishment process of the current Soil & Water Sciences graduate program until after all the students enrolled in this program will have completed their degrees

The Graduate Council has extensively deliberated about the questions you raised in your October 19 memo. In summary, we believe that the above actions do not amount to a consolidation of the two programs. Rather, UCR’s proposal will only change the status of one program, Environmental Sciences, and will create a new track for the other Program, Soil & Water Sciences. However, we understand that the previous memo sent by Graduate Council to CCGA was too brief and indeed could raise additional questions. Therefore, in our new memo we shall elaborate on both the substance of these changes and the procedures taken in their consideration.

Firstly, let us address the substance of the proposals. The recommendations concerning the Environmental Sciences and the Soil & Water Sciences graduate
programs proceeded from the UCR internal review of the Environmental Sciences program and the External Review of the Soil & Water Sciences program, both conducted by UCR's Graduate Council in Spring 2004. The recommendations to change the Environmental Sciences program from an interdepartmental to a departmental graduate program were presented by the UCR Graduate Division Dean to the Deans of the College of Natural and Agricultural Sciences (CNAS), and the CNAS Deans gave their approval. Please see the enclosed memorandum from Graduate Council Chair Deborah Wong dated June 10, 2005. The plan to move the

Environmental Sciences interdepartmental graduate program in to the Department of Environmental Sciences was then included in the UCR campus five-year plans for 2006/2011 and 2007/2012.

We realize that much hinges on shared usage of key terms given to the changes recommended for the Environmental Sciences and Soil & Water Sciences graduate programs. We view the change of the Environmental Sciences interdepartmental graduate program to a departmental program to be a change of status. We see the addition of a Soil & Water Sciences track to the departmental Environmental Sciences graduate program to be just that -- the addition of a new track. Neither of these actions comprises a consolidation since the currently existing Soil & Water Sciences graduate program would continue to operate until students presently enrolled in it complete their degrees. Nor does the recommended moratorium on admission to the existing Soil & Water Sciences graduate program comprise a disestablishment of that program. Once students presently enrolled in that graduate program complete their degrees, we expect that application to discontinue it will take place, but there is no guarantee that such application will occur. Further, none of the changes proposed by the Department of Environmental Sciences comprises a transfer or a graduate program from one campus to another.

Secondly, we believe that all the correct procedures were done at UCR to adopt these recommendations. In this process, Graduate Council first reviewed the findings of internal and External Review committees regarding the programs in question and made recommendations to them. Graduate Council held open the External Review until such time as the department and programs involved were able to mobilize and act with regard to the findings and recommendations of the Extramural Review team and the Graduate Council. We acknowledge the depth of discussion and extensive labor that was required over a two-year period (following receipt of Graduate Council recommendations in June 2005) for the department and programs involved to reach a more than two-thirds majority consensus and to propose the changes that the Department of Environmental Sciences presented to the Graduate Council in May 2007.
In reviewing these procedures, Graduate Council came to the conclusion that broad constituencies were indeed apprised of the proposed program changes to the Environmental Sciences interdepartmental graduate programs and the Soil & Water Sciences graduate program. Please see the enclosed memorandum from Environmental Sciences department Chair Marylynn Yates dated May 9, 2007, which details the extensive discussions and votes taken by the faculty groups regarding the proposed changes. As Dr. Yates explains, faculty from departments outside the Environmental Sciences department will be welcomed to continue association with the departmental program through the Cooperating Faculty mechanism. Research by participating faculty will continue unchanged. As to notification of students, discussions with students were conducted by various faculty. As part of the External Review conducted in 2004, the Soil & Water Sciences student representative Jacob Berkowitz received from Graduate Council a copy of the Extramural Team Report. In Fall 2007, some faculty maintained that Soil & Water Sciences students had not been consulted; this reservation was not presented to Graduate Council in May 2007 when the department of Environmental Sciences presented its proposed changes for approval.

In summary, the UCR Graduate Council believes that both the substance of the matter and the subsequent procedures fully warranted our approval of these proposals submitted by the Environmental Sciences in May 2007. Therefore, Graduate Council approved the proposals and forwarded them to CCGA in September 2007. We fully recognize that it is the purview of CCGA to approve relocation of an interdepartmental graduate program to a departmental graduate program. Consistent with its function as the UCR Academic Senate Committee that reviews proposed graduate program changes, UCR’s Graduate Council also approved the addition of a proposed Soil & Water Sciences track to the recommended Environmental Sciences departmental graduate program. Any prospective request to disestablish Soil & Water Sciences program will need to follow UCR Academic Senate procedures, which presently include the requirement for a vote by the full Senate faculty. This can be done only after all presently enrolled students graduate from the existing Soil & Water Science program.

We thus recommend approval of the proposals requested in our memo of September 2007 and stated in the second paragraph, above.

Yours sincerely,

Ilya Dumer, Chair
UCR Graduate Council

cc: Academic Senate
   Dr. Gan, Chair, Dept. of Environmental Sciences
October 19, 2007

WENDY A. ASHMORE, CHAIR
GRADUATE COUNCIL, UC RIVERSIDE

RE: UC Riverside Environmental Sciences and Soil & Water Sciences Consolidation

Dear Wendy,

CCGA considered your campus's request to consolidate its programs in Environmental Sciences and Soil and Water Sciences into a single program that will offer a degree in Environmental Science. After referring to Appendix 2 of the "Compendium" (http://www.ucop.edu/acadaff/accomp), and discussing your request in that light, CCGA has decided by majority vote that it would be helpful to have further information in evaluating the appropriateness of the consolidation. Thus, we are taking you up on your offer to provide some background and clarification.

According to the Compendium, CCGA should be brought in at an early stage to understand how the dialog about the consequences of consolidation is playing out on the campus, and to be confident that the Senate's strong role in overseeing academic issues is appropriately represented. While the approval of the UCR Graduate Council suggests, prima facie, that the Senate was engaged in the discussion, it is difficult to ascertain this with certainty given the shortness of the appeal made to CCGA.

Thus, CCGA asks that the UCR Graduate Council provide a somewhat more detailed appeal, citing the reasons given by the department for requesting consolidation, and why the Council felt those reasons to be justified. Was the impact of the consolidation on students already in the two programs considered? To what extent was the broader academic community, including students within the program, as well as departments that might be affected by the consolidation, made aware of the proposal and given an opportunity to comment to the Senate? Were lead administrators (department chairs and deans) cognizant of the proposal, and did they raise any potential points of concern, or generate any formal expressions of approval?

You should feel free to consult again with any of these parties should you feel it would be helpful in providing this background to CCGA.

Respectfully submitted,
Bruce Schumm
Chair, CCGA

cc: CCGA
Virginia Bustamante, Administrative Analyst, Graduate Division, UC Riverside
September 12, 2007

Dr. Bruce Schumm, Chair
Physics
329 Natural Sciences II
University of California
Santa Cruz, CA 95064

Dr. Schumm:

At its meeting of May 23, 2007, the Graduate Council at UC Riverside voted to reorganize and combine its current graduate programs in Environmental Sciences and Soil & Water Sciences. These changes entail the following: the former Interdepartmental graduate program in Environmental Sciences will now be housed in the Department of Environmental Sciences, and will be its primary graduate program. The Soil & Water Sciences graduate program that was formerly housed in the department of Environmental Sciences will now become a track within the department. Students currently enrolled in the Soil & Water Sciences graduate program will be allowed to complete their degree programs unless they choose to change degree objectives. Upon CCGA's approval of these changes, we will place a moratorium on admissions to the Soil & Water Sciences graduate program and will formally disestablish it once the last student in the program has graduated. We request that these proposed changes be placed on CCGA's consent calendar for review and approval. If you have any questions concerning these changes, please do not hesitate to contact me.

Wendy A. Ashmore, Chair
Graduate Council

WA/A

Cc: Todd Giedt, CCGA Committee Analyst
June 26, 2007

Marylynn Yates, Chair, Dept of Environmental Sciences
Paul Ziemann, Director, Environmental Sciences Graduate Program

At its meeting of May 23, 2007, the Graduate Council considered the proposed changes and reorganization of the Soil & Water Sciences and Environmental Sciences graduate programs into one combined graduate program in Environmental Sciences. I am pleased to inform you that the Council approved the changes. It is the Council's understanding that the new combined program must be placed on the consent calendar of the systemwide Coordinating Committee on Graduate Affairs (CCGA), so that the combining of the two graduate programs as well as the discontinuance of the Soil and Water Sciences graduate programs can be reviewed and approved simultaneously. Once we receive approval from CCGA, the program changes will take effect immediately. Both current graduate programs will allow continuing students to complete their degree programs unless they choose to change degree objectives to the new combined program. The Soil & Water Sciences degree program will have a moratorium placed on it until the last student currently enrolled has graduated, at which time the program will be formally disestablished. The Council wishes to congratulate both graduate programs on creating this combined program and wishes them every success in this new endeavor. With this being said, the Council formally closes the external reviews of both graduate programs and will notify the department once CCGA has approved the changes.

R. Robert Russell, Chair
Graduate Council

RRR/vb

Cc: Academic Senate
Dan Schlenk, Graduate Advisor, Environmental Sciences
David Parker, Graduate Advisor, Soil & Water Sciences
John Herring, Graduate Assistant, Environmental Sciences
Mari Ridge, Graduate Assistant, Soil & Water Sciences
Graduate Division, Admissions
Graduate Division, Graduate Academic Affairs
Dear Dr. Russell,

Attached please find a proposal from the Department of Environmental Sciences and the Environmental Sciences Graduate Program to change the interdepartmental Environmental Sciences Graduate Program and to begin the process of disestablishing the Soil & Water Sciences Graduate Program. We hope that this item can be added to the agenda for the next meeting of the Graduate Council.

Sincerely,

Marylynn V. Yates  
Professor of Environmental Microbiology  
Chair, Department of Environmental Sciences  
University of California  
Riverside, CA 92521

phone: 951-827-2358  
fax 951-827-3993
Date: May 9, 2007 [Revised 5/22/07 per C&P’s requested changes]

To: Graduate Council
From: Department of Environmental Sciences
Re: Proposed Curricular Changes to the Graduate Program in Environmental Sciences

Current
Recent years have seen a dramatic increase at the state, national and global levels for individuals trained to solve complex environmental problems. Environmental concerns associated with pesticides, waste disposal, air pollution, and other health threatening activities have prompted regulatory agencies to develop strategies for the use and disposal of potentially-hazardous materials. This situation has created a need in universities, government and industry for scientists trained in a broad spectrum of disciplines.

The Interdepartmental Graduate Program in Environmental Sciences mobilizes the expertise of UCR’s faculty to provide advanced educational opportunities for students interested in pursuing research, teaching, and professional careers in the wide spectrum of activities relevant to environmental science.

Graduate Program
The Interdepartmental Graduate Program in Environmental Sciences offers the M.S. and Ph.D. degrees in Environmental Sciences.

Admission Students normally come to the program having completed an undergraduate degree in environmental science, or a related discipline such as atmospheric science, aquatic science, earth science, economics, hydrology, soil science, or one of the basic sciences such as biology, chemistry, or physics. Students must have completed the following courses or their equivalents before entering the program, or to make up the deficiency early in their graduate studies.

Proposed
Advanced training in Environmental Sciences is becoming increasingly necessary to address complex problems involving natural resources and environmental quality. Although this task frequently requires specialized knowledge in various fields of science, it also requires understanding and integration of a wide variety of interacting physical, chemical, biological, and societal influences. This interaction makes graduate study in environmental sciences distinct from many other scientific fields. We have designed our program to offer advanced training in a number of specialized field areas within environmental sciences, operating within a single graduate degree program administered by the Department of Environmental Sciences. Students trained in the Environmental Sciences Graduate Program can fill many areas of expertise needed in the state and nation. Potential career opportunities exist at regulatory agencies, consulting firms, government and academic research institutions, and industrial research facilities.

Graduate Program
The Environmental Sciences Graduate Program offers the M.S. and Ph.D. degrees in Environmental Sciences.

Admission Entry to the program requires completion of a baccalaureate degree in a field appropriate as preparation for graduate study in environmental sciences. Students normally will come to the program from an environmental sciences related discipline such as atmospheric science, aquatic science, earth science, environmental chemistry, hydrology, or soil science; a basic science such as biology, chemistry, or physics; or in a social science discipline such as economics, political science, geography, or sociology. Students may conduct research under the supervision of a sponsoring faculty member in any of the following field areas. Students must specify a field area for entry into the program.
Environmental Chemistry and Ecotoxicology

The Environmental Chemistry and Ecotoxicology field area focuses on the sources, physical and chemical transformations, and removal processes of chemicals in soil, water, and air, and their impacts on ecological systems. Faculty: Arey, Atkinson, Gan, Schlenk, Ziemann.

Entrance requirements. There are no entrance requirements for the Environmental Chemistry area beyond the general requirements for admission to the ESGP. For Ecotoxicology, prospective students would be expected to have had courses in General Biology/Zoology and Organic Chemistry. Students who do not have sufficient background to take the core course or specific elective courses may, however, need to take prerequisite courses.

Environmental Microbiology

The Environmental Microbiology field area encompasses the study of microbial processes in natural and agricultural ecosystems and the effects of microorganisms on environmental processes and environmental quality. Research topics include fundamental research on microbial physiology, genetics, and ecology as related to the environment, applied research on microbial effects on the fate and transport of pollutants, anthropogenic effects on microbial communities, fate and transport of human pathogenic microorganisms in the environment, and the application of microorganisms and microbial assays as indicators of soil and water quality. Faculty: Crowley, Frankenberger, Lanoil, Stein, Yates.

Entrance requirements. Students admitted to the Environmental Microbiology field area are expected to have a baccalaureate degree in biology, microbiology, or closely related field or demonstration of extensive background in biology and microbiology. Recommended prior course work includes chemistry (general, organic, and biochemistry), biology (general and advanced course work), microbiology (general), and statistics (general). Deficiencies in these areas must be remedied during the first year of graduate school.

Environmental and Natural Resource Economics and Policy

The economics and policy field area focuses on the human aspects of environmental problems. Coursework emphasizes training in the traditional areas of environmental and natural resource economics, including welfare theory, externalities, pollution control, resource extraction, and non-market valuation, but also in sustainability, environmental management, and environmental policy. Research topics could include the environmental impacts of agriculture, transportation and urbanization, land use in poor and industrialized countries, international trade and the environment, climate change.
- Economic issues associated with agriculture, natural resources, and the environment
- Economic impacts of air quality and climate on agriculture
- Management and policy issues associated with California water resources

There is no foreign-language requirement for the program.

and methodological advances in non-market valuation, to name just a few. Training in this field enables a student to analyze and address a wide variety of environmental policy issues. Faculty: Baerenklau, Cutter, Fernandez, Knapp, Sanchez-Rodriguez, Schwabe.

**Entrance requirements:** Students admitted to the Environmental and Natural Resource Economics and Policy field area normally will have completed a baccalaureate degree in the natural sciences, social sciences, or engineering. At least two undergraduate courses in economics and statistics are recommended. Students who do not have sufficient background to take the core courses or field courses may need to first take prerequisite courses.

**Soil and Water Sciences** The Soil and Water Science field area offers comprehensive training in the chemistry, physics, biology, and ecology of soils, surface waters and wetlands. Students can specialize in a variety of areas, including soil and aquatic chemistry, hydrology, limnology, soil-plant relations, biogeochemistry, bioremediation, geomicrobiology, contaminant fate and transport, water resources management, hillslope processes, soil genesis, soil mineralogy and geomorphology, and related areas. Faculty: Amrhein, Anderson, Chang, Crohn, Gabet, Gan, Graham, Jury, Parker, Sickman, Simunek, Wu, Yates.

**Entrance requirements:** Admission to the Soil and Water Sciences field area requires a baccalaureate degree with preparation in both physical and life sciences. It is recommended that students have completed one year of general chemistry, as well as courses in general physics, organic chemistry, calculus through integrals, general biology, statistics, and physical geology or physical geography.

**Environmental Sciences and Management** The Environmental Sciences and Management field area is designed to serve students seeking interdisciplinary training in environmental research. Students enrolled in this field area will be expected to pursue a rigorous research plan that involves research in one or more of the following areas: science, management, or policy. Students will have the opportunity to select study committees from a spectrum of environmental disciplines. Faculty: All Environmental Science Graduate Program Faculty.

**Entrance requirements:** There are no additional entrance requirements for this field area beyond those to enter the graduate program.

**Course Work** The Ph.D. and M.S. degree programs both require completion of the courses given below, which are specific to each field area. Students with a M.S. objective may need to take additional courses to fulfill the requirements of the
Plan 1 (Thesis) or Plan II (Comprehensive Examination) options. Upon acceptance to the program, the student will select an Advisory Committee made up of three members of the participating faculty in the BSGP to assist in the planning of the individualized curriculum. Electives are chosen in consultation with the Advisory Committee. Students also must attend a seminar each quarter (to be chosen in consultation with the major advisor). There is no foreign language requirement for the program.

Environmental Chemistry and Ecotoxicology All students must complete one core course:
ENSC/ENTX200/CHEM246.

Students focusing on Environmental Chemistry must complete 4 electives from the following list, of which at least 2 must be at the graduate level:
ENSC/SWSC245, SWSC203, SWSC204.

Students focusing on Ecotoxicology must complete: ENTX201 and ENTX208 and take at least two electives from the following list one of which must be at the graduate level:
ENSC/SWSC214, ENSC/SWSC217, ENSC/SWSC224, ENSC/SWSC225, ENSC/SWSC232, ENTX200L, ENTX/CHM/SWSC244, ENTX/CHM/SWSC245, SWSC203, SWSC204, ENTX154, ENTX205.

Environmental Microbiology Students must complete the following core courses: MCBL 201, MCBL 221, MCBL 211, and at least 4 elective courses (or 12 credit hours), three of which must be at the graduate level.

Environmental and Natural Resource Economics and Policy Course requirements include: core course sequences consisting of ECON 200A, ECON 200B, ECON 200C and ECON 205A, ECON 205B, ECON 205C; field course sequence consisting of ECON 207, ECON 208, ECON 209; and three elective courses comprised of upper division undergraduate courses and/or graduate courses approved by their advisor. Students must earn a satisfactory score on the doctoral cumulative examination in microeconomic theory, attain a "B" average in each of the core and field course sequences, and pass the doctoral qualifying examination with written and oral components.
No student will be given more than three
The Department of Environmental Sciences offers the M.S. degree in Environmental Sciences under the Plan I (Thesis) and Plan II (Comprehensive Examination) options.

Soil and Water Sciences Students must complete one course in each of the following core course groups.

Chemistry
- ENSC 104/SWSC 104
- CHEM 136/ENSC 136/ENTX 136/SWSC 136

Physics
- ENSC 107/SWSC 107
- ENSC 163

Biology
- ENSC/MCBL/SWSC 133
- BPSC 134/ENSC 134/SWSC 134
- ENSC 141/MCBL 141/SWSC 141

Natural Structure and Diversity
- ENSC 138/GEO 138/SWSC 138
- ENSC 140/SWSC 140

Students may have completed these prior to admission or they may take them early in their graduate program. Students must present a departmental seminar summarizing results of their thesis or dissertation or internship during the final quarter of matriculation.

Environmental Sciences and Management Because students enrolled in this field area may carry out interdisciplinary research for their advanced degree, the graduate course plan will be individualized. It is expected that the student and his/her Advisory Committee will design a course plan that includes graduate environmental science, management, and/or policy courses. The student will be required to take 6 courses (24 units), 3 of which must be at the graduate level.

Master’s Degree
The Department of Environmental Sciences offers the M.S. degree in Environmental Sciences under the Plan I (Thesis) and Plan II (Comprehensive Examination) options. The general requirements for the M.S. degree are found in the Graduate Studies section of the General Catalog. All students are required to give a presentation annually at the Environmental Sciences Graduate Program Student Symposium.
Plan I (Thesis) Students must complete a minimum of 36 quarter units of graduate and upper-division undergraduate courses in or significantly related to Environmental Sciences. At least 24 of the 36 units must be graduate courses. Students must take one course each from 1 and 2, above and two courses from 3. A maximum of 12 of the 24 graduate units may be in graduate research for the thesis. Each quarter, students must enroll in the seminar course CHEM 257/SWSC 257 and give an oral presentation at the annual student seminar or retreat. No more than two units of CHEM 257/SWSC 257 may be applied toward the 24 unit graduate requirement. Students must write a thesis that is accepted by the thesis committee members and pass an oral defense of the thesis.

Plan II (Comprehensive Examination) Students must complete a minimum of 36 quarter units of graduate and upper division undergraduate courses in or significantly related to Environmental Sciences. At least 18 of the 36 units must be graduate courses. Students must take at least four graduate courses from the three core areas listed above, including one course each from 1, and 2, above and two courses from 3. Students may count no more than 2 units of CHEM 257/SWSC 257 toward the required 18 units and no units from graduate research for thesis or dissertation.

Students take a comprehensive written examination that covers fundamental topics in environmental sciences. The written examination, which is three to four hours long, is prepared and evaluated by a committee appointed by the program chair. The examination is taken during the latter part of the final quarter in the M.S. program. Students must wait at least eight weeks before retaking a failed examination. Students failing the examination twice are dismissed from the program.
Doctoral Degree

The Department of Environmental Sciences offers the Ph.D. degree in Environmental Sciences.

Course Work Upon acceptance to the program, the student selects a course work advisory committee consisting of three members of the faculty participating in the graduate program to assist in the planning of the individualized curriculum. A course work study plan should be filed with the graduate advisor by the second quarter after admission. Students must take one course each from 1. and 2. below and two courses from 3.

1. Transport and Fate of Chemicals
   - CHEM 246/ENSC 200/ENTX 200 (Fate and Transport of Chemicals in the Environment)
   - ENSC 202 (Principles and Application of Environmental Modeling)

2. Interactions and Cycling in the Biosphere
   - ENSC 208/ENTX 208/SWSC 208 (Soil Toxicology)
   - ENSC 232/SWSC 232 (Biogeochemistry)

3. Environmental Policy and Management
   - ENSC 204 (Environmental Management)
   - ENSC 206/POSC 206 (Environmental Law and Policy)

Students must enroll in the seminar course CHEM 257/SWSC 257 each quarter and give an oral presentation at the annual student seminar or retreat. The elective courses prescribed by the student's course work advisory committee depends on the research interests of the students.

Normative Time to Degree 2 years

Doctoral Degree

The Department of Environmental Sciences offers the Ph.D. degree in Environmental Sciences. The general requirements for the Ph.D. degree are found in the Graduate Studies section of the General Catalog.

Course Work Students must complete the course requirements given above for the specific field area. All students are required to give a presentation annually at the Environmental Sciences Graduate Program Student Symposium.
Comprehensive Written and Oral Qualifying Examinations Following completion of all course work, the student writes a qualifying examination prepared and administered by the written qualifying committee, which consists of five faculty members. Three members represent interests in the student’s line of research; the other two represent breadth in the two core areas outside the student’s main area of concentration. The written exam may be attempted only twice. If it is failed twice, the student is redirected to the master’s degree or terminated from the program.

Oral Examination A student who has successfully passed the written qualifying examination may proceed with the oral qualifying examination, conducted before the oral qualifying examination committee, which consists of five faculty members, one of whom must be from outside the graduate program in Environmental Sciences. The oral examination may be attempted only twice. If the oral qualifying exam is failed twice, the student is redirected to the master’s degree or terminated from the program. The written and oral exams are normally taken at the end of the second year of graduate study.

Ph.D. Written Qualifying Examination Following completion of all course work prescribed by the student’s Advisory Committee, a Ph.D. Written Qualifying Examination will be prepared and administered to the student by a Ph.D. Written Qualifying Examination Committee. The Ph.D. Written Qualifying Examination Committee will consist of at least three faculty members with interests in the student’s line of research. The purpose of this examination is to determine that the student has gained sufficient knowledge in the chosen field to perform professionally and competently. This exam may be attempted only twice. If this exam is failed twice, the student may be redirected to the M.S. degree if the student does not already hold an M.S. in Environmental Sciences or terminated from the program.

Ph.D. Oral Qualifying Examination A student who satisfactorily passes the Ph.D. Written Qualifying Examination may proceed with the Ph.D. Oral Qualifying Examination, which will focus on the dissertation proposal. This examination is conducted before the Oral Qualifying Examination Committee, consisting of five faculty members, one of whom must be from outside the ESGP. This examination may be attempted only twice. If this exam is failed twice, the student will be redirected to the M.S. degree if the student does not already hold an M.S. in Environmental Sciences or terminated from the program. The Ph.D. Written and Oral Qualifying Examinations will normally be taken at the end of the second year of graduate study and before the start of the third year.

Dissertation and Final Oral Examination All students write a doctoral dissertation, which is read and accepted by all members of the doctoral dissertation committee, comprised of three faculty from the graduate program in Environmental Sciences. The student must pass a final oral defense of the thesis in front of the committee.

Dissertation All Ph.D. students must write a doctoral dissertation, which must be read and accepted by all members of the Doctoral Dissertation Committee, comprised of at least three faculty members from the ESGP. A final oral dissertation defense in front at least three Doctoral Dissertation Committee members may be required.

Relationship between Master’s and Doctoral Programs The master’s and Ph.D. programs are separate. Students who enter the Ph.D. program do not need to acquire a master’s first, although students may elect to take both

Relationship between Master’s and Doctoral Programs The M.S. and Ph.D. programs are separate. Students who enter the Ph.D. program do not need to acquire a M.S. degree first, although students may elect to take both.
Career Opportunities

Students trained in the Interdepartmental Graduate Program in Environmental Sciences can fill many areas of expertise needed in the state and nation. Such areas include regulatory agencies, consulting firms, government and academic research institutions, and industrial research facilities.

Graduate Courses

ENSC 200. Fate and Transport of Chemicals in the Environment (4) S Lecture, 4 hours. Prerequisite(s): CHEM 109 or CHEM 110B; CHEM 112A, CHEM 112B, CHEM 112C; or consent of instructor. Covers the identification of toxicants and their sources in the environment; equilibrium partitioning of chemicals in the environment (between air, water, soil, sediment, and biota) using physicochemical properties; and the transport and chemical transformations of chemical compounds in air, water, and soil media. Includes case studies of fate and transport of selected toxic chemicals. Cross listed with CHEM 246 and ENTX 200.

ENSC 201. Environmental Management (4) S, Even Years Lecture, 3 hours; discussion, 1 hour. Prerequisite(s): ECON 003 or consent of instructor. An introduction to economic instruments used to make environmental policy to address pollution control and natural resource protection on local and international scales. Investigates public and private incentives for single and multiple polluters to reduce pollution and conserve exhaustible and renewable resources. Fernandez

ENSC 202. Principles and Applications of Environmental Modeling (4) W, Alternate Even Years Lecture, 3 hours; discussion, 1 hour. Prerequisite(s): graduate standing or consent of instructor. Introduction to the principles of transport modeling, including mass balance and flux laws, boundary conditions, and rate processes. Discusses and demonstrates the use of compartmental and differential models of specific environmental processes. Also examines case studies and environmental modeling software applications. May be taken Satisfactory (S) or No Credit (NC) by students advanced to candidacy for the Ph.D. Chang, Jury, Simunek

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ENSC 205. Functional Diversity of Prokaryotes (3)
Lecture, 3 hours. Prerequisite(s): BCH 110A, BCH 110B, BIOL 121/MCBL 121; or equivalents; or consent of instructor. In-depth coverage of bacterial and archaean bioenergetics, cell structure, diversity of metabolism, regulation of metabolism, growth, and biosynthesis, and cell-cell interactions between prokaryotes and eukaryotes. Project involves analysis of metabolic pathways from complete, annotated, prokaryotic genome sequences. Cross-listed with MCBL 201 and PLPA 201. Stein

ENSC 206. Environmental Policy and Law (4) S, Even Years Seminar, 3 hours; extra reading, 3 hours. Prerequisite(s): graduate standing, POSC 010, POSC 020; or consent of instructor. An introduction to the process and politics of environmental regulation in the United States and the negotiation and implementation of international environmental accords. Uses social scientific methods of analysis to investigate specific issues such as air quality, energy, and biodiversity. Cross-listed with POSC 206 Allison

ENSC 208. Ecotoxicology (4) Lecture, 3 hours; discussion, 1 hour. Prerequisite(s): BIOL 005A, BIOL 005B, CHEM 112A, CHEM 112B; or consent of instructor. Introduction to the impact of chemicals upon ecological systems. Examination of the fate and effects of environmental chemicals in various hierarchies of biological organization to learn how to carry out precise and accurate assessments of ecological risk. Cross-listed with ENTX 208 and SWSC 208. Schlenk

ENSC 214. Soil and Water Chemistry Laboratory (2) Laboratory, 6 hours. Prerequisite(s): concurrent enrollment in ENSC 104/SWSC 104 or consent of instructor. A series of advanced laboratory exercises involving modern analytical methods for soils, sediments, and surface waters. Topics include trace metal speciation, isotope exchange kinetics, mineral solubility, adsorption isotherms, redox couples, and partitioning and biodegradation of organic contaminants. Cross-listed with SWSC 214. Parker

ENSC 217. Vadose Zone Processes (4) Lecture, 3 hours; discussion, 1 hour. Prerequisite(s): MATH 099B or MATH 09HB, ENSC 107/SWSC 107; or consent of instructor. A study of physical and mathematical descriptions of transient flow and transport processes in the vadose zone. Emphasis is on numerical solutions to equations describing the movement of water, gas, contaminants and heat, including chemical and biological reactions. Explores mathematical models for direct and inverse solutions, spatial heterogeneity, and determination of soil hydraulic properties. Cross-listed with SWSC 217 Simunek
ENSC 224. Watershed Hydrologic Systems (5) S, Odd Years Lecture, 3 hours; discussion, 2 hours. Prerequisite(s): ENSC 163, GEO 157, MATH 009C or MATH 09HC; or consent of instructor. Discusses the hydrologic processes occurring at watershed scale and the systems of and distributed approaches to watershed hydrologic modeling. Focuses on modeling rainfall-runoff processes and considering water quality to determine the validity of hydrologic simulation models. Cross-listed with SWSC 224.

ENSC 225. Watershed Biogeochemistry (3) S, Even Years Lecture, 3 hours. Prerequisite(s): ENSC 163; CHEM 136/ENSC 136/ENTX 136/SWSC 136 or ENSC 104/SWSC 104 or ENSC 232/SWSC 232 is recommended. Emphasizes terrestrial aquatic linkages in headwater catchments, focusing on hydrologic pathways, isotopic and geochemical tracers, nutrient cycling, water quality, experimental manipulations, and modeling. Cross-listed with SWSC 225.

ENSC 232. Biogeochemistry (4) W, Odd Years Lecture, 3 hours; discussion, 1 hour. Prerequisite(s): graduate standing; consent of instructor. A study of the biogeochemical cycling and exchange of carbon and important nutrients (N, S, base cations) between the lithosphere, hydrosphere, and atmosphere. Quantitatively describes processes at scales ranging from local to global. Addresses modern concerns about water and atmospheric quality, including global climate change. Cross-listed with SWSC 232. Parker

ENSC 265. Special Topics in Earth and Environmental Sciences (1-3) F, W, S Seminar, 1-3 hours. Prerequisite(s): graduate standing. Involves oral presentations and small-group discussions of selected topics in the areas of biogeochemistry, global climate change, geomicrobiology, earth surface processes, and interplanetary life. Graded Satisfactory (S) or No Credit (NC). Course is repeatable as content changes to a maximum of 10 units. Cross-listed with GEO 265.

ENSC 275. Research Seminar in Environmental Sciences (1) Seminar, 1 hour. Prerequisite(s): graduate standing or consent of instructor. Involves seminars by faculty, visiting scholars, environmental professionals, and advanced graduate students on current research topics in Environmental Sciences. Graded Satisfactory (S) or No Credit (NC). Course is repeatable.

ENSC 290. Directed Studies (1-6) Consultation, 1-3 hours; individual study, 1-15 hours. Prerequisite(s): graduate standing; consent of instructor and graduate advisor. Individual study of selected topics in Environmental Sciences under faculty direction. Graded Satisfactory (S) or No Credit (NC). Course is repeatable.
ENSC 297. Directed Research (1-6) Outside research, 3-18 hours. Prerequisite(s): graduate standing; consent of instructor. Individual research performed under the direction of a faculty member. Graded Satisfactory (S) or No Credit (NC). Course is repeatable.

ENSC 299. Research for the Thesis or Dissertation (1-12) Outside research, 3-36 hours. Prerequisite(s): graduate standing; consent of instructor. Research in environmental sciences for the M.S. thesis or Ph.D. dissertation. Graded Satisfactory (S) or No Credit (NC). Course is repeatable.

Professional Courses

ENSC 302. Teaching Practicum (1-4) Practicum, 3-12 hours. Prerequisite(s): graduate standing. Supervised teaching in Environmental Sciences or related courses. Required of all teaching assistants in Environmental Sciences. Graded Satisfactory (S) or No Credit (NC). Course is repeatable.
DATE: May 9, 2007

TO: R. Robert Russell, Chair
Graduate Council

FROM: Marylynn V. Yates, Chair, Department of Environmental Sciences
Paul Ziemann, Director, Environmental Sciences Graduate Program

RE: Response to Reviews of the Environmental Sciences Graduate Program and the Soil & Water Sciences Graduate Program

Since the reviews of the Environmental Sciences Graduate Program (ESGP) and the Soil and Water Sciences (SWSC) Graduate Program, the faculty in the Department of Environmental Sciences have been engaged in extensive discussions regarding the optimal structure for graduate education for students interested in these areas. The result of these discussions is a proposal to revise the requirements of the existing interdepartmental ESGP and make it a departmental program based in the Department of Environmental Sciences. Non-departmental faculty who wish to participate in the program may do so as Cooperating Faculty Members. The SWSC graduate program has been proposed to be discontinued, and a SWSC field area in the departmentally-based ESGP has been created.

We have designed the new departmental ESGP to offer advanced training in a number of specialized field areas within environmental sciences. Each field area is built around faculty expertise and contains a committed core of faculty who will participate in the teaching and research activities of the field. This structure gives us the flexibility necessary to create rigorous study areas relevant to select student interest, while at the same time housing a potentially large number of diverse faculty members within a single administrative structure under a single graduate program.

The large majority of our faculty believes the revised program will alleviate crucial problems with the current structure of graduate training in our department and facilitate the attainment of several desirable goals in the future. Benefits of the revised program include:

- All department faculty members can participate equally in a single unified program and have a vested interest in its success.
- Invites participation by Cooperating Faculty Members from a variety of additional disciplines represented on campus (e.g., Plant Pathology and Microbiology, Chemical and Environmental Engineering, Physics and Astronomy, Chemistry, Economics, Political Science, Botany and Plant Sciences, and others)
Expands the potential pool of applicants beyond existing pools for current graduate programs by offering programmatic flexibility and opportunities for cross-disciplinary interactions.

- Facilitates the creation of new fields of study in response to evolving areas of research and graduate training opportunities (such as IGERT).
- Allows rigorous disciplinary training in several distinct intellectual areas connected by a common medium of study within a single program. Transcripts officially state each student's field of study.
- Reduces competition between multiple programs for high-quality applicants.
- Administrative structure requires relatively few senior faculty members while serving the needs of a wide variety of graduate students.
- Facilitates cross-disciplinary interactions amongst students and faculty.
- Builds upon recent top 10 national rankings in Soil Science and Environmental Sciences, consistent with our department Mission and Vision statements, with our undergraduate program structure, and with recent external reviews and recommendations of the Graduate Council.

The department also considered extensively the opportunity to offer a core course that all students would take. There was much debate on this issue. Several faculty members worked hard to devise a common course, while a few were strongly opposed. It was pointed out that a common course is not a requirement for graduate programs in the UC system. Given that we are beginning a new program with a wide variety of fields, it was decided to omit a common core course for now but to revisit this issue in the future after the program has had time to evolve and respond to student and faculty interests.

The following votes on the proposals were taken. Each of the votes taken, and the results obtained are described below.

1. The faculty in the Department of Environmental Sciences were asked to vote on the conversion of the Interdepartmental ESOP into a departmental ESOP, with the requirements as described in the attached proposal. Twenty-seven faculty were eligible to vote on this issue; of those, 19 voted positively, 5 voted negatively, one faculty member chose not to participate as s/he has been on leave for the last several months, and two faculty were unavailable. The faculty who voted negatively cited reasons including the following: 1) the title "Environmental Sciences" implies a broad, interdisciplinary program, but not all potential disciplines are represented in the proposed program; 2) the program is not integrative because the field areas are largely independent from one another; 3) the field areas vary substantially with respect to entrance requirements, curricular models, and expectations; 4) some of the field areas overlap with existing degree programs (e.g., Environmental Toxicology, Microbiology); 5) the program represents a collection of sub-programs that lack critical mass to stand alone; 6) there is no broadening of the expertise beyond that of the department, contrary to what was suggested by the external review team; 7) the Environmental Science and Management track needs more structure and rigor.
The faculty in the Department of Environmental Sciences were asked to vote on the
disestablishment of the SWSC Graduate Program. Nineteen faculty are listed as
members of the SWSC Graduate Program. Of those faculty, 12 voted to disestablish the
program, 5 voted against the disestablishment, one did not vote as s/he has been on leave
for the last several months, and 1 was unavailable. The remaining eight faculty in the
department were asked to vote on this issue. Seven voted in favor of disestablishment
and one did not vote. The faculty voting negatively on this issue cited reasons including
the following: 1) there is a demand among students for a degree with the title “Soil &
Water Sciences”; 2) the program is appropriately focused, highly regarded nationally and
internationally, and has enthusiastic and dedicated faculty participants; 3) the quality and
motivation of students in the program is very high, and 4) if the new ESGP is approved,
the proper course of action would be to convert the existing departmental SWSC program
into the new ESGP departmental program.

The 54 faculty in the interdepartmental ESGP were asked to vote on the proposal to
disestablish the interdepartmental ESGP. The vote was 49 in favor of disestablishment,
and 5 opposed. The faculty voting negatively on the issue cited the following reasons: 1)
the interdepartmental ESGP should be put in moratorium so that faculty whose needs are
destined by the departmentally-based ESGP have the opportunity to determine if it might
be used in a different form (e.g., as an interdepartmental Soil Science Program or
interdepartmental Ecosystem and Earth Surface Science Program); 2) the Soil & Water
Sciences Program could instead be converted to a departmental ESGP; 3) the proposed
program is not interdisciplinary, which is the nature of environmental sciences; and 4)
there is considerable overlap with existing programs.

The 54 faculty in the interdepartmental ESGP were asked to vote on accepting the
proposed ESGP as a departmental program to be housed in the Department of
Environmental Sciences. The vote was 51 in favor of conversion of the interdepartmental
ESGP to a departmentally-based ESGP program, 2 opposed, and 1 abstention. The
faculty voting negatively on the issue cited the following reasons: 1) the topic is too
broad to be housed in a single department with a narrow scope of expertise and interest.
The faculty member who abstained felt it would be inappropriate to vote on an issue that
should be determined by the Department of Environmental Sciences faculty.
DATE: June 10, 2005

TO: Faculty of the Interdepartmental Environmental Sciences and Soil & Water Sciences graduate program

THROUGH: Walt Farmer, Chair, Dept of Environmental Sciences
Keith Knapp, Director, Interdepartmental Environmental Sciences graduate program

FROM: Deborah A. Wong, Chair
Graduate Council

RE: GRADUATE REVIEWS OF ENVIRONMENTAL SCIENCES AND SOIL & WATER SCIENCES GRADUATE PROGRAMS

The Graduate Council commends both programs for the in depth assessments they have done in response to reviews of their programs. We believe these two closely related programs have arrived at a solution to the various problems they have faced in the past few years and the Graduate Council is ready to assist in the development of a vibrant, newly revised program that encompasses the strengths of both.

Since the recommendations of the review teams for the Interdepartmental Graduate Program in Environmental Sciences (ENSC) and Soil & Water Sciences (SWSC) programs were so congruent, the Graduate Council discussed the two reviews concurrently, including the program responses to the Findings and Recommendations. They strongly support the proposal of the great majority of the ENSC program faculty that they become a departmentally based program, in the Environmental Sciences Department. The Graduate Dean met with the CNAS Deans to discuss this and was given their approval for moving the interdepartmental ENSC program into the ENSC department and for closing the ENSC GRU. The Grad Council recommends that the newly formed program adopt the present model used by several programs on campus that have faculty from other departments participating in their graduate programs. This model uses the cooperating faculty membership option. The new program can use the newly approved "Guidelines for Developing By-Laws for Interdepartmental Graduate Programs" (see attached) as a model to develop their own by-laws for their departmental based program so that the cooperating faculty title confers more privileges than are typical with this title, if they so wish. In this manner they can call all participating faculty in the new program "Graduate Faculty", as they would like to do, without having to develop entirely new procedures and titles.
The Graduate Council notes that the ENSC program would retain a connection to conservation biology for at least some of its students. At present, ecologists on campus are planning a track in Ecology to be part of the Ecology, Evolution and Organismal Biology Graduate Program, and the ENSC faculty are encouraged to investigate opportunities for cooperation with this group. Faculty with interests in biological aspects of environmental sciences can be invited to join the ENSC program as cooperating faculty; these cooperating faculty members may well come from a variety of departments and programs on campus, including EEOB, Entomology, and Botany and Plant Sciences. We recommend the ENSC program call a faculty meeting to discuss the proposal to revise the program, including the proposed number of tracks, and determine who among the faculty from outside the department will wish to be cooperating faculty. This will constitute the founding faculty who will now be charged to develop the new core curriculum, the tracks and the by-laws to govern the program. The Graduate Council will need to review and approve the revisions to the ENSC program before the review can be closed.

With regard to the SWSC program, the Graduate Council supports the proposed Option 1 of the program faculty, where SWSC becomes a track in the revised ENSC program, which will now be departmentally based. We request that the SWSC program faculty work with the ENSC program faculty (which would include the cooperating faculty), to create a curriculum for the revised ENSC program. A new revitalized ENSC program, with SWSC as a track, will enable the department of ENSC, with its undergraduate program in ENSC, to display its full strength to the graduate community.

If the programs can achieve this "merger" in developing new curriculum for approval by the Graduate Council in time for the November meeting of the Academic Senate, recruitment into the new program for Fall, 06/07 is possible. This can be done entirely on the campus and will not require CCGA approval if we list SWSC as disestablished as a degree-granting program in the 5 year academic plan to Office of the President in May of 2006. Approval for new tracks in the ENSC program can be campus based. As a courtesy, we will want to inform CCGA once both aims have been achieved.

CC Dean Rabenstein, Graduate Division
Dean Angle, CNAS
Associate Dean Cooksey, CNAS
Associate Dean Yarmoff, CNAS
Academic Senate
Guidelines for Developing Bylaws for Interdepartmental Graduate Programs

The Graduate Council requires that all Interdepartmental Graduate Programs have an approved set of bylaws that provide for procedures for Program governance. The purpose of this document is to provide guidelines for developing appropriate bylaws and to describe the approval process.

Bylaws should be prepared in the following format:

<table>
<thead>
<tr>
<th>Section Title</th>
<th>To be included</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title page</td>
<td>1. The name of the graduate program followed by “Bylaws”</td>
</tr>
<tr>
<td></td>
<td>2. Graduate Council’s approval date (left blank on original submission)</td>
</tr>
<tr>
<td></td>
<td>3. Revision approval dates</td>
</tr>
<tr>
<td>I. Objective</td>
<td>1. A brief statement of the discipline and mission of the program</td>
</tr>
<tr>
<td></td>
<td>2. Degree(s) offered by the program.</td>
</tr>
<tr>
<td>II. Membership</td>
<td>1. Describe graduate program faculty membership criteria.</td>
</tr>
<tr>
<td></td>
<td>2. Describe activities expected of the faculty to retain membership.</td>
</tr>
<tr>
<td></td>
<td>3. Describe the basis and procedures for termination of membership.</td>
</tr>
<tr>
<td></td>
<td>4. Describe process for Emeritus faculty participation in the program.</td>
</tr>
</tbody>
</table>

When preparing this section, please refer to the Graduate Council “Guidelines for Membership in Interdepartmental Graduate Programs” in Appendix 1 below.

III. Organization & Administration

This Article may include the requested information in one statement or as separate articles. An example of a statement that might be inserted here is, "The administration of the program and its activities will be vested in an Executive Committee consisting of (number) program members and chaired by the graduate program director."

A. Graduate Program Director

Describe the duties and responsibilities of the Graduate Program Director. Director is responsible for all administrative tasks not otherwise delegated by the bylaws and Chairs the Executive Committee. Appointment of the Program Director is described in Appendix II.

B. Graduate Advisers

Describe the duties and responsibilities of the Graduate Adviser(s).

Describe the process by which individuals are nominated for appointment to this position by the Dean of the Graduate Division.

C. Committees

Provide a list and description of all standing committees set up to administer the graduate program. At a minimum, graduate programs should have an Executive Committee and a Membership Committee. These may be combined in small programs. The descriptions should include the committee’s responsibilities, composition, and basis for selecting members.

The Executive Committee coordinates with the Director in administering the program and assumes governance oversight. Unless otherwise stipulated,
the Executive Committee nominates the Program Director.

A Membership Committee reviews new member applications and
nominations and conducts periodic reviews of members, using the criteria
indicated in Article II.

Additional committees that might be formed include Admissions,
Fellowship and Awards (student financial support), Curriculum, or Seminar
committees.

C. Major
Professors

Describe the duties and responsibilities of major professors of students
enrolled in the program (e.g., participation in annual review of graduate
student progress).

D. Meetings

The bylaws should specify the frequency of regular meetings of the program
faculty (at least one annual meeting is expected). Describe who may call
additional meetings, and under what circumstances. For example, the
graduate program director may call a special meeting of the program as
deemed necessary or desirable by the Executive Committee.

In addition, a description should be included of how faculty members can
petition for additional meetings (for example, “by petition of five or more
members”).

E. Quorum

The Graduate Council has defined a minimum quorum. It specifies that all
issues that require a vote must be:

- voted on by 50+% of the eligible members
- passage requires a 50+ % supporting vote.

The program may set more stringent quorum requirements if it wishes. The
accepted quorum should be described in the bylaws. Voting may be done by
E-mail ballot. If the program approves this option, its bylaws should indicate
that.

F. Amendments

All amendments and revisions must be submitted to Graduate Council for
review and approval. Passage of amendments to bylaws must satisfy the
program’s quorum rules.
Appendix 1.

GUIDELINES FOR MEMBERSHIP IN INTERDEPARTMENTAL GRADUATE PROGRAMS

Election to membership in an interdepartmental graduate program is governed by the bylaws of the specific program.

The by-laws of each program must specify the criteria for nomination, initial election and periodic review of membership. These criteria will generally be based on academic title, disciplinary research area, research accomplishments and contributions to the program. Thus, faculty from throughout the campus may be eligible for election to graduate program membership providing that they meet the following criteria:

1. Hold an appropriate academic title as a member of the Academic Senate of the University of California (includes Professors, Lecturers with Security of Employment, Professors in Residence, Professors of Clinical “___”, Professors Emeritus/a, and Research Professors).

2. Have an active program of research or scholarship commensurate with the expectations of the University of California. This is essential if the faculty member is to provide appropriate research guidance to his/her graduate students.

Each elected member of a graduate program will normally have the full rights and privileges accorded to other members. Graduate program members are expected to make contributions in one or more of the following ways in order to maintain their membership status:

1. Take an active role in the administration of the graduate program by serving on administrative committees, serving as a graduate adviser or serving as an administrative officer of the program.
2. Provide graduate level instruction and mentorship.

Appendix 2.

APPOINTMENT OF THE GRADUATE PROGRAM DIRECTOR

A Nominating Committee should solicit the names of nominees for a new Graduate Program Director from the faculty. The faculty will be polled for comments on the nominees. All comments will remain confidential. The Nominating Committee will forward at least two names to the Graduate Dean along with comments received on the nominees. The Graduate Dean, in consultation with the college Dean, will forward his/her recommendation to the Chancellor, who makes the appointment. The normal term of the Director’s appointment is three years.

Approved by Graduate Council on 6/8/05
PROCEDURES FOR TRANSFER, CONSOLIDATION, DISESTABLISHMENT, OR DISCONTINUANCE OF AN ACADEMIC PROGRAM, OR UNIT

Regardless of the origin of the initial recommendation for transfer, consolidation, disestablishment, or discontinuance, the Senate feels that deliberations by, and consultation with, the abovementioned agencies of the campus must occur prior to the final decision by the Academic Senate in the case of programs or by the Chancellor in the case of units. To assure that such consultation has taken place, the following procedures are established.

Some units may administer more than one program (e.g., a graduate and an undergraduate program in one department; a program in a specific language and the program in Comparative Literature in the Department of Literatures and Languages). On the other hand, some programs may be the joint responsibility of more than one unit, e.g., a program under the responsibility of an interdepartmental committee.

1 A proposal for the transfer, consolidation, disestablishment, or discontinuance of a program or unit may originate with a department, program or group; with the Dean of the college or school to which the department, program or group is administratively attached; or with the Committee on Educational Policy or the Graduate Council. A proposal for the transfer, consolidation, disestablishment, or discontinuance of a unit may also originate with an appropriate vice Chancellor. If the unit or program being considered for transfer, consolidation or termination is unique in the University, or if its closure would have systemwide or intersegmental effects, the President shall be consulted early in the process.

2 If the request for transfer, consolidation, disestablishment, or discontinuance originates with a department, program, or group, it shall be forwarded to the Committee on Educational Policy, the Graduate Council, and the Committees on Academic Personnel and Planning and Budget.

3 If the proposal for transfer, consolidation, disestablishment, or discontinuance originates with the Dean of the college or school or with a vice Chancellor, it shall be forwarded to the Committee on Educational Policy, the Graduate Council, and the Committees on Academic Personnel and Planning and Budget, but only after consultation with the department, program or group under consideration and with the Executive Committee of the college or school. The Executive Committee may refer the recommendation to the Faculty of the College or school, for its advice, if the committee deems it necessary or advisable. Responses of these agencies of the school or college shall be appended to the Dean's or vice Chancellor's letter of transmission to committees of the Academic Senate.

4 If the proposal for transfer, consolidation, disestablishment, or discontinuance arises with the Committee on Educational Policy or the Graduate Council, the department, program or group, the Dean of the college or school, and the Executive Committee of the college or school must all be given the opportunity to review the proposal, make comments, and present relevant materials before any final recommendation is made by the Committee on Educational Policy or the Graduate Council.

5 Senate committees reviewing the proposal shall consult, early in the deliberations, with the
Chairperson, Faculty and students of the program or unit under review, and with the Dean and the Executive Committee of the college or school to which the program or unit is administratively attached, if deemed necessary. Consultation shall also take place with Faculty and students of related departments, programs or groups that would be affected by a decision to transfer, consolidate, disestablish, or discontinue. The recommendations of the Committees on Academic Personnel and Planning and Budget shall be sought. Consultation between the Committee on Educational Policy, the Graduate Council and the Committees on Academic Personnel and Planning and Budget shall be maintained throughout the review process.

a) A Special Review Committee, normally consisting of individuals from other campuses or institutions, will be appointed by the Advisory Committee of the Academic Senate in consultation with the Administration, the Executive Committee of the college or school and the program/department concerned. The charge to the Committee shall be developed by the Dean and the Executive Vice Chancellor and shall be subject to the review of the Advisory Committee. A review will be promptly carried out by the Special Review Committee.

b) The report of the Special Review Committee, together with the file and other documentation will be assessed by the Committees on Educational Policy, Academic Personnel, and Planning and Budget, and by the Graduate Council in cases of review of graduate programs. This assessment is to be carried out in consultation with the Chancellor, the Executive Vice Chancellor, the President (if required by Systemwide procedures) and other interested individuals and groups, including the program/department being reviewed.

c) The Executive Vice Chancellor shall submit the report of the Special Committee to his/her Student Committee on Budget and Academic Planning for its review and recommendation.

d) The results of Senate committee deliberations will be transmitted to the Advisory Committee which shall submit its recommendations to the Division for action and the Executive Vice Chancellor shall provide as information to the item any comments from the Student Committee on Budget and Academic Planning.

6 Faculty shall retain the right, at all times during deliberations, to advise the Executive Committee of their college or school, or the committees of the Academic Senate, on the proposal.

7 In all cases the deliberations of the Committee on Educational Policy and/or the Graduate Council shall be in consultation with the Chancellor and the appropriate vice Chancellors.*

* Under the present administrative organization of the campus, the appropriate vice Chancellors would be the Executive Vice Chancellor. The proposed wording is intentionally non-specific to allow for possible future changes in designated titles.

8 If, after the foregoing review, a recommendation for transfer, consolidation, disestablishment, or discontinuance is reached by the Committee on Educational Policy, for undergraduate programs or units, or by the Graduate Council, for graduate programs or units, or for an entire program, the Advisory Committee shall present the recommendation to the Division for its action. Concurrence or dissent, and the arguments therefore, shall be presented at the same time, by the Graduate

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Council, for undergraduate programs or units, and by the Committee on Educational Policy, for graduate programs or units.**

**The Committee on Educational Policy should have the opportunity to comment on the transfer, consolidation, disestablishment, or discontinuance of graduate programs or units, and the Graduate Council on the transfer, consolidation, disestablishment, or discontinuance of undergraduate programs or units.

9 After completion of the foregoing procedures, the results of the consultation on units and the results of any final decisions on programs shall be reported by the Division to the Chancellor. If the decision is to transfer, consolidate, disestablish, or discontinue a program, it shall be reported to the Systemwide Administration as prescribed universitywide. If the decision is to recommend the transfer, consolidation, disestablishment, or discontinuance of a unit or the disestablishment of a degree, the recommendation shall be made to the Systemwide Administration as prescribed universitywide.

10 No programs or units shall be transferred, consolidated, disestablished, or discontinued until the enrolled students can be accommodated in a fashion that will assure completion of the degree. Arrangements shall be made for the orderly and appropriate accommodations of academic and staff employees whose positions are affected by a decision to disestablish or discontinue or to transfer to another campus or to combine with another program or programs on a different campus. These arrangements shall be in accordance with existing personnel policies to the extent that they are adequate for each specific decision. Where existing policies are not adequate, supplemental policies shall be developed by the Systemwide Administration through appropriate consultation with the Academic Senate. Until such policies are adopted, historical precedent and established practice shall supplement existing personnel policies. Under no circumstances shall the transfer, consolidation, disestablishment or discontinuance of a program or unit result in the termination of a tenured Faculty member from the University of California.

11 The campus will report any transfers, consolidations and discontinuances annually on its Academic Program Inventory.

5/3/89: Editorial corrections were made with reference to Committee on Budget and Interdepartmental Relations and vice Chancellor designations by the Committee on Rules and Jurisdiction.